# The Dental Digest.

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## Original Contributions.

### ADENOID GROWTHS OF THE NASO-PHARYNX AS FACTORS IN DENTAL DISEASES AND DEFORMITIES.

By T. C. Evans, M. D., Lecturer on Opthalmology, Otology, Etc., Kentucky School of Medicine, Louisville, Ky.; Read before the Kentucky State Dental Association, June 16-18, 1896.

The naso-pharynx is that part of the respiratory tract lying immediately behind the posterior opening of the nasal chambers and above an imaginary plane extending from the free margin of the soft palate to the vertebral column. This naso-pharyngeal space varies considerably in size in different individuals. Ordinarily in the adult it measures about one inch in its vertical diameter, three-fourths of an inch in its antero-posterior diameter, and one and one-fourth inches from side to side. In children it is, of course, much smaller. On the lateral walls of this space are the openings of the Eustachian tubes. The lining of the cavity partakes of the general character of the mucous membrane of the respiratory tract, the epithelia are cylindrical and ciliated. Grouped together on the roof and posterior wall of this cavity are masses of lymphoid tissue. These masses closely resemble in structure the faucial tonsil and are sometimes designated as Luschka's tonsil or the third tonsil. They are more generally known by the term "Adenoid Growths."

The anatomy, physiology and pathology of this space interests the dental surgeon, not so much from its contiguity to his field of operation as from the fact that during childhood and early adolescence the lymphoid masses that stud its roof and posterior wall are prone to hypertrophic changes. This hypertrophy lessens or obliterates the lumen of this portion of the respiratory

tract, mechanically interfering with or altogether inhibiting nasal respiration.

In this brief paper it will be impossible to enter into a discussion of the etiology or pathology of adenoid growths or to give a detailed description of the many complications and sequelæ that accompany or follow the affection. Those that more directly concern the dental surgeon are secondary and follow as the result of mouth breathing. Just here I wish to digress far enough from the subject to say that, in spite of all that has been said and written on the mouth breathing "habit," no such habit exists. "Mouth breathers" we all see many and often, but they are such from necessity and not from habit. Contrary to the general impression, the obstructive diseases of the nasal cavities proper, the turbinated hypertrophies and turgescences, the much reviled "nasal catarrh" of the laity—so common in adult life, are exceedingly rare in childhood.

While I am unable to give statistics, I think it safe to conclude, judging from my personal experience, that up to the twelfth year fully ninety per cent. of the cases of mouth breathing result from adenoid obstructions in the naso-pharynx.

An examination of the mouths of children suffering from adenoid growths will show that a large majority of them are the subjects of dental irregularities. In the younger ones will be found the contracted arch and elevated palate,—the V-shaped maxilla—later in life this deformity is increased by the eruption of the permanent teeth, which, owing to the contracted arch, are forced into various malpositions. Among the results of dental irregularities may be mentioned the distortion of the features, the obliteration of the lines of expression, indistinct speech, a predisposition to dental caries, and disorders of the alimentary tract following imperfect mastication. When we take into consideration the frequency with which dental irregularities complicate or follow obstructions in the naso-pharynx, and the influence that these irregularities must exercise on the appearance, health, development, and well being of the patient, it seems strange that in the medical literature of adenoid growths little or no attention is paid to the subject.

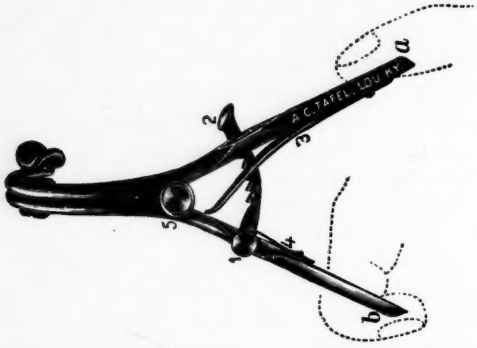
The dental surgeon has accomplished wonders in the correction of these deformities, but his energy and ingenuity seem to

have been expended chiefly in perfecting the mechanism of his appliances, as the literature of orthodontia makes only brief mention of "adenoid growths" as an etiological factor in dental irregularities. Thus the throat surgeon removed the cause without correcting its effects and the dental surgeon corrected its effects without removing the cause. That the V-shaped maxilla follows as the direct result of mouth breathing I have no doubt; just how it is produced is difficult to explain. I believe the elevation of the palatine arch is more apparent than real, and the chief change consists in a contraction and elongation of the alveolar arch, and that this is produced partly by the loss of occlusion from the constantly open mouth, and partly by the tension and weight incident to the depression of the inferior maxilla.

The diagnosis of adenoid growths is easily made from the characteristic symptoms that have so often been described—the open mouth, the contracted arch, the elongated face, the expressionless countenance, the dead or nasal voice, the inability to articulate certain consonants, the discharge of viscid mucus from the nose, the disturbed sleep with its sweats, snoring and night terrors, the chest deformity, deafness and mental hebetude, all of which make a picture that can hardly be mistaken. But if these are not sufficient, positive evidence can be had by passing the index finger into the naso-pharynx and making thorough survey of its walls and contents. This procedure is easily accomplished, and while causing considerable pain it cannot possibly do harm.

The treatment of adenoids of the naso-pharynx is either expectant or surgical. The probability of favorably affecting lymphoid hypertrophies by the use of drugs, either topically or constitutionally, is so remote as to scarcely entitle it to consideration. The expectant plan—the "outgrowing" process, which the parents so confidently count on—has at least this advantage, that the hypertrophy usually diminishes with age, and sometimes entirely disappears with adolescence. The cavity of the naso-pharynx is proportionately larger, so that the respiratory obstruction, so far as the naso-pharynx is concerned, is diminished, or altogether disappears. On the other hand, the deformities due to years of mouth-breathing do not disappear with the "outgrowing" of the obstruction. The high-arched palate, the contracted nasal chambers, the deformed alae, with their small round nostrils, the list-

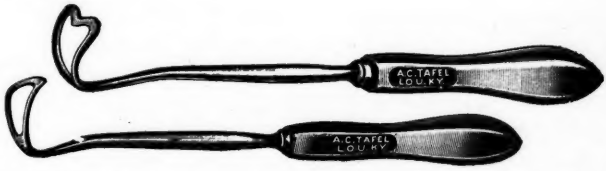
less facial expression, due in part to the deformity and in part to the impaired hearing, have by this time become so much a part of the physical make-up that neither time nor treatment can effectually efface them. The expectant plan is, at best, long, tedious and uncertain, entailing years of suspense on the physician and parents, and subjecting the patient to dangers which, when once encountered, cannot be corrected.




It will not be necessary to review the many operations that have been devised and the almost endless list of instruments and appliances that have been invented for the removal of adenoids —most of which have now been abandoned. Most operators now confine themselves to one of three methods, viz., the post-nasal curette, the post-nasal cutting forceps, destruction by the galvano-cautery. Personally I am partial to the curette, preferring what is known as the improved Gottstein, which I show you here. In many cases this will be all the instrument necessary to complete the operation. In young or unmanageable children a mouth gag will be needed; for this I prefer the O'Dwyer gag, as being the least complicated and the most satisfactory. With the Gottstein curette, supposing that the operator is at all familiar with the anatomy and contour of the naso-pharynx, it is almost impossible to lacerate the soft palate, the Eustachian tubes, or the posterior border of the vomer, all of which are endangered with the cutting forceps.

Having decided on an operation with the curette, the chief question will be whether or not a general anæsthetic is required.

The hemorrhage after the operation is quite profuse for a few minutes, making an annoying and troublesome complication in the use of anæsthetics. This danger can be lessened but not entirely obviated by the position of the patient during the operation, placing the head lower than the body so that the blood will gravitate away from the larynx. As a rule I operate without an anæsthetic. While it is, of course, a disagreeable operation, it is not excessively painful; patients who were old enough to talk intelligently have often told me that curetting produces little more pain than the preliminary exploration of the naso-pharynx with the index finger. Cocaine seems to do little good in these cases and is not well borne by children, There does not seem to be any tendency to a recurrence of the growths. The dangers from the operation, other than those due to the administration of anæsthetics under adverse conditions, are almost nil. There is no shock and the subsequent discomforts are rarely sufficient to confine the patient to bed.




In closing this paper I wish to submit to your consideration the following conclusions:—

That the acquired forms of dental irregularities, with but few exceptions, are the result of the position, weight, and tension incident to oral respiration, either continuous or intermittent.

That mouth breathers are not such from habit, choice, or stupidity, but from necessity, owing to some disease or deformity of the nostrils, nasal cavities or naso-pharynx.

That in childhood it is exceedingly rare to find obstructive disease of the nasal cavities proper of sufficient severity or extent to make mouth breathing a necessity.

That mouth breathing in children under twelve years of age is, in the vast majority of cases, due to obstructions in the naso-pharynx by adenoid growths.

That the viscid mucus which hangs from the nostrils in ropy masses, and adds to the untidy appearance of many of these un-

fortunate mouth breathers, is not of nasal origin but is a perverted secretion from the naso-pharynx.

That adenoid growths are not amenable to medicinal treatment, either local or constitutional.

That removal by surgical means offers, up to this time, the only rational and successful method of treatment.

That, with the post-nasal curette, with or without a general anæsthetic, they are quickly, safely, and permanently removed.

That while the removal of the obstruction and the re-establishment of nasal respiration will not be sufficient to correct the deformity that already exists, with the removal of the cause the dental irregularities are more easily, speedily and perfectly corrected.

That in addition to the dental complications, mouth breathing lowers the vitality, disturbs the digestion, impairs the intelligence, distorts the features and deforms the chest.

That most of these adenoid subjects suffer from impaired hearing, owing to the recurring attacks of catarrhal and purulent otitis media.

That these children are peculiarly susceptible to the contagion of diphtheria and scarlet fever and that tubercular infection often takes place through this channel.

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## CANCRUM ORIS—A CASE IN PRACTICE.

By J. P. Shaw, D.D.S., Burkesville, Ky., Read before the Kentucky State Dental Association, June 16-18, 1896.

Because of Cancrum Oris occurring so rarely in an adult I have prepared this paper. All writers treat this disease as one peculiar to children in crowded districts, where the lack of fresh air and a healthful diet, together with scrofulous and syphilitic tendencies, act as predisposing causes, and cite only a few cases where gangrene occurs in adults.

It is not my intention, however, to attempt a treatise on Cancrum Oris, nor to embellish my paper with high-sounding phrases or technicalities, but as concisely as possible to detail the case as it came under my observation. This paper is a compilation of notes taken by myself and Dr. W. C. Keene, the physician in charge, and the case is as follows:

The patient was about thirty-five years old. For several years he had lived in Southern Missouri and in Arkansas, returning to this, his native state, a few months previous to his illness. His occupation was that of a "cropper," or farmer on shares, his life consequently an active one. His diet was very plain, consisting chiefly of cornbread and pork. At this time he was apparently in good health.

About the last week in May he had a left inferior first molar extracted by a physician. A few days later he sent for the same physician, complaining of a sore mouth for which no relief was afforded. On June 3rd, Dr. W. C. Keene was called in and later myself. An examination resulted in the diagnosis of gangrene, and the disease was found to be considerably advanced. The cheek, as well as the gum-tissue, was involved, the sloughing was very great, and the discharge offensive.

All of the part involved was thoroughly scraped and all appearance of diseased tissue removed, and the part was then well cauterized with nitrate of siiver. A nourishing diet was ordered and a tonic of iron and quinine prescribed. At the second visit the socket of the tooth, where the destruction had been greatest, was again scraped and an application of tinc. muriate iron made. A mouth-wash of tinc. myrrh, listerine, and Condy's fluid, was ordered to be used *ad libitum*. This course of treatment was followed with very happy results, as healthy granulation was established and a decided general improvement. June 10th the patient was dismissed, as he was sufficiently convalesced to resume his work on the farm.

On June 18th the case again required attention, and an examination showed that the disease had progressed to an alarming extent. An attempt was again made to remove the sloughing tissue, but it was fruitless because of the extent. The former treatment was resumed as far as possible, but without any good results, the patient dying July 2nd.

The general condition of the patient during the progress of the disease will perhaps be interesting if not instructive. At no time was there a perforation of the cheek, and the extension of the disease was confined principally to the left side, although all the tissue of the oral cavity was affected. By introduction of the probe it was very apparent that the osseous tissue was not only

denuded but must have been acted upon. It seemed as if the probe would extend almost to the orbit, but an examination, or any attempt to treat the jaw, was so painful that it had to be given up during the last few days, when the disease had progressed to its greatest extent. Because of the swelling and distortion nothing could be determined except by examination with an instrument. The gums extended over all the teeth in both the upper and lower jaw.

From the period of relapse the glands of the neck were swollen and the face greatly distorted. Later the glandular system throughout the entire body was involved, seeming to be greater on the left than on the right side.

The patient complained of fainting spells at night and of a constant severe headache. I cannot state the condition of the bowels, but heard no complaint of diarrhea, as seems to be true of children similarly affected.

No hemorrhage occurred at any time except when diseased tissue was being scraped. There was a constant expectoration of a fibrous greenish discharge, which was unbearably offensive during the last few days.

Nothing could be ascertained from family history as a predisposing cause, and from all the indications this seems to have been a true case of Cancrum Oris.

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## ADDRESS OF PRESIDENT.

By J. F. Rees, D. D. S., Owenton, Ky., Read Before the Kentucky State Dental Association, June 16-18, 1896,

*Gentlemen of the Kentucky State Dental Association:* We meet on this twenty-sixth anniversary of our association, for the purpose of correcting past errors, discussing whatever new things may be presented, and adopting such as may appear of benefit to the public and ourselves.

The duty of one should be the duty of all, everyone alike should take an active interest in the discussion of papers and such other matters as may come before the meeting, the success of which will be measured by our enthusiasm as a body.

There has been no pronounced advancement made in any department of our science since our last meeting, and yet I am

sure we have all acquired greater skill in our work. If we will look back but fifty years and see the crude dentistry of that time, and compare it with that of to-day, to the thoughtless it would perhaps appear that we had reached the zenith, that the skilled dentist of to-day knew about all there was to know, whereas the truth is, that we are merely on the threshold of our science, and the developments of the next fifty years will no doubt be greater than those of the past fifty.

I believe that the time is near at hand when dentistry will be divided into many different specialties. Prosthetic and operative dentistry will be distinct, and they, in turn, will have their subdivisions. There will be specialties in crown and bridge work, irregularities, implantation, pyorrhea, etc. This condition will come gradually, in fact we see it to some extent to-day. God speed the day when it does come. I am convinced that Louisville could liberally support a half-dozen or more skilled specialists in pyorrhea alone.

Popular dental education is a subject that has been ably and extensively written upon, and yet it has signally failed to find lodgment in some directions where we have a right to look for results. Right here I wish to say that the ignorance of the medical profession as a class in regard to the teeth and their reflex action is a great hindrance to us. It is a well-known fact that three-fourths of the so-called facial neuralgia is caused by the teeth, as well as many other complicated troubles which are often treated unsuccessfully by physicians until the cause is removed.

In view of these conditions I feel impelled to suggest that a committee be appointed by this Association, with power to confer with the faculties of the various medical colleges of the State. A plan can then be devised to have a chair of dentistry in each college, or at least some provision can be made to have a course of lectures on oral surgery during each term, so that the medical practitioners of the future will learn to first examine closely the teeth of their patients before treating them for any trouble which could be caused by the teeth.

We have now forty-eight dental colleges in the United States, and the forty-two that reported last year had 5,277 matriculates, graduating 1,226. Colleges and graduates will continue to in-

crease, and if all who obtained the degree of D.D.S. were worthy of the name it would not be amiss, for there is plenty of room and work for all. But this, unfortunately, is not the case, and it seems incumbent upon us to devise some means of raising the standard of proficiency. There has already been much written and said upon this subject, but we are still confronted with the fact that this matter needs a remedy. That which would go far towards curing the evil would be to succeed in getting all dentists to attend their State and local meetings, a thing which we have thus far failed to accomplish.

The Dental Protective Association is a subject of sufficient importance in my judgment to be again brought before this meeting. This organization is gotten up by dentists, is managed by dentists, in the interest and for the benefit of dentists, and saves our profession many thousand dollars annually by watching and defeating the patent sharks. As you all know, this matter needs no eulogy from me; its benefits are so widely and equally distributed that it should by right command the support of every dentist in the country, and I am surprised that it is so poorly supported. I beg to urge those who are not already members to send in their names, accompanied with $10.00, and become enrolled to make war upon a common enemy.

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## BALSAMO DEL DESERTO AS A ROOT FILLING AND NERVE CAPPING.

By Dr. C. G. Edwards, Louisville, Read Before the Kentucky State Dental Association, June 16-18, 1896.

The subject of root canal fillings is one which has probably been more written and talked about than any one operation which we are called upon to perform in the oral cavity, and yet the subject is not entirely exhausted, nor are we altogether happy. We are still searching for the ideal filling—something which will so close the foramen, and fill the attenuated and tortuous canals in such a manner, that pathogenic germs, if present, will not only be destroyed, but embalmed, and the filling be so complete for all time as to prevent the ingression of anything which might contain the dreaded microbe.

I shall not deal here with the etiology, pathology, or the application of therapeutics, which are usually associated with root

canal fillings. The mineral, vegetable, and animal kingdoms, and mineral cements have been drawn upon for substance to fill the roots of teeth. Gold, lead, tin, the oxychlorides and oxyphosphates, wood, cotton, gutta-percha, beeswax, etc., are or have been used, each having its advocates.

For some years gutta-percha has been almost universally used. Owing to its plastic nature under the influence of a moderate degree of heat, and its solvent property in chloroform, it is easily and readily conveyed through long and crooked canals to the apex of the root. It is non-irritating, and is said not to disintegrate, but many distinguished operators have not adopted it for the reason, as they claim, that in the case of chloro-percha, by the evaporation of the chloroform the gutta-percha is left in a contracted state, leaving a vacuum which for obvious reasons would be objectionable.

About a year ago I read an article in the *International Journal*, by Dr. W. H. White, of New Mexico, advocating the use of a new material which he had discovered. In the October number of the same journal appeared a second article by Dr. White, giving a more extended experience with what he called "Balsamo del Deserto." In this article he gives a record of 138 abscesses treated, and the canals filled with Balsamo del Deserto, without the slightest irritation following. Making due allowance for the enthusiasm of a discoverer, this balsam of the desert is a rather remarkable and important material, according to Dr. White's claims.

Balsamo del Deserto is a substance resembling bees-wax in color and about the consistency of thick honey; it possesses a slightly fragrant aromatic odor; is very adhesive and insoluble in water and the secretions of the mouth, but is soluble in alcohol. Dr. White claims it does not dry out or harden, that it clings to the walls of the canal or damp surfaces, and is permanent.

I wrote to Dr. White last October and he kindly sent me two bottles of the balsam. I immediately began to experiment with it, not only as a root filling, but also to cap exposed pulps. My first case was an abscess of long standing—what is termed a "blind" abscess—the foramen being very large and open. The following morning I was called upon to relieve a very sore tooth and a swollen face. My second case was a failure, more disap-

water and treated it otherwise also. I thought it was doing as well as could be expected, but he was impatient for it to get well, so he had one of his professors lance the jaw on the outside, just below the ramus. This allowed the pus to discharge, but it also left a very ugly looking scar.

In March, 1891, I extracted seven anterior lower teeth for a gentleman eighty-six years of age. This is the oldest person I have ever done any extracting for.

May 27, 1891, I had the misfortune to break off a drill in each of the buccal roots of a left superior molar. I mentioned the fact to the patient, telling him it would be very difficult to remove them; he said to leave them alone, that he did not believe they would do any harm. As the canals were in a healthy condition, and the drills some distance up in them, I concluded to let them remain and see how the tooth would act. So I filled the remaining portions of the canals and filled the cavity with alloy. I have frequently seen the patient since and he always remarks that it is the best tooth he has in his head.

In September, 1891, I extracted for a lady patient several teeth, the roots of which were very long. On attempting to remove the left superior cuspid I broke it off about a quarter of an inch above the gum margin, it seeming to just fall apart, and the entire pulp fortunately came out with the part which broke off. Upon examination, I concluded that there was about half an inch of the tooth left in, and, as it seemed to have a bend in the root, I thought it best not to pain the lady by trying to gouge it out. After checking the flow of blood I succeeded in filling the canal with gutta-percha points. I suppose the root has never given any trouble, as the patient has not returned, except to have a plate made, although I asked her to let me know if she ever experienced any pain.

In January, 1893, a gentleman came to me suffering with a terrible pain between the left superior second and third molars. He insisted upon having the third molar out, although it was sound. Upon extraction I found that a small piece of wooden toothpick, which had been broken off between the teeth, had caused all the trouble.

January 1, 1894, I crowned the root of a right superior cuspid which was so badly broken down that I had to build it up with

pointing than the first, though the result was not so painful. The perfect ease and rapidity with which the fillings were removed, and the relief being so prompt, I was neither dismayed nor discouraged; I was merely experimenting. I changed my methods of manipulation, and since then, in about fifty cases, I have not had a failure to my knowledge. I have also capped ten or twelve exposed pulps, several of them being complete exposures, with the loss of but one so far as I know.

Whether or not it is an antiseptic, as claimed, I am unable to state, but from its physical nature alone I am inclined to regard it as much superior to chloro-percha, and it is more readily conveyed to the canal and is always ready for use. The method of using it which I have adopted is, to substitute it for chloro-percha, using the gutta-percha cone when it is feasible. In capping exposed pulps I use the balsam on a piece of sterilized paper, laying it directly on or over the pulp, and proceed as in any other capping.

As a matter of fact, seven months is an insufficient time to test the permanency of any material, yet in the case of alveolar abscesses, or where there is a devitalized pulp to be considered, unless sterilization has been complete, seven hours may not pass without apical irritation or inflammation. My experience certainly tends to corroborate most of the substantiated claims of Dr. White for this balsam.

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## INCIDENTS OF OFFICE PRACTICE.

By Dr. Henry Pirtle, Louisville, read before the Kentucky State Dental Association, June 16-18, 1896.

In presenting these few incidents which have come under my notice, I have not arranged them in the form of a paper, and do not relate them because of their merits, but give them with the hope that they will incite other members of this Association to report unusual cases.

The first case is that of an impacted third molar. In November, 1890, a medical student came to me with the left inferior third molar badly impacted. It was a very severe case, his jaw being considerably swollen, and the inflammation so great that he could not open his mouth more than half an inch. I washed out the pocket as well as I could with peroxide of hydrogen and hot

# Digests.

*The Dental Review for April, 1896.*

"THE ARTISTIC IN CROWN AND BRIDGE WORK," by L. A. Edwards, D. D. S., Chicago, read before the Odontographic Society of Chicago. A piece of work to be artistic must be perfect in all respects, judged not only from a mechanical standpoint, but from the effects produced upon the eye of an observer. A crown or piece of bridge work may be perfect mechanically, but still be very far from artistic. How many crowns do we see that could be made perfect by a slight change in the position of the facing, either by throwing the neck or cusp out or in a little, or by changing the position a hair either mesially or distally; their number is legion. Again how many of our dentists are color blind? Every day crowns are seen of a different shade from those of the natural teeth. What a pity, when with a little care and watchfulness the exact shade can be reproduced. How the looks of many mouths, otherwise good and perfect, are spoiled by the appearance of a facing just a little off color; it has changed during soldering, or the dentist has not been careful enough in picking out the shade, and he is either too busy or does not care, thinks it is near enough to the proper shade, or he may be color blind. Let us hope that it is the latter, for then he cannot be blamed so much, that is, of course, if he does not know that he cannot distinguish colors. We would not like to think that he let it go because he was careless, and supposes that it will never be noticed. It will be noticed, sooner or later some kind friend will say, "Why, your crowned tooth is not the same color as your own teeth. What dentist did it for you? Now, if you have any more work to be done you must go and see my dentist. He would not let a piece of work like that go out of his office." The result is, your patient loses confidence in you, and somebody who needs patients loses them, and somebody gains them. How many crowns do we see with a broad line of gold showing at the margin of the gums, where the band has not been properly cut out or contoured, and these margins have receded. It does not look very artistic. Now to be artistic,

amalgam. When I examined the root I found that it was decayed almost up to the process on the labial and anterior approximal aspects, besides being decayed up the canal and abscessed. After treating the root and getting the abscess healed, I inserted a post in the canal and built out the root just below the gum margin, then fitted the crown, and at last reports it was doing nicely.

In March, 1894, while doing some dental work for a young man, I observed that the right superior first molar was almost decayed away. I examined it and found that the anterior buccal root was separated from the other two. The pulp chamber was decayed through in two places. The only portion above the gum was a very small bit at the posterior buccal side. I requested the patient to allow me to experiment on the roots and see what I could do with them. After treating the roots and filling the canals, I put a post in the anterior buccal and palatine roots. With the assistance of these posts I built up an entire crown of amalgam upon the stump. I saw the gentleman recently and was told that the work was holding out well.

Since I commenced practice I have seen two lower molars with four root-canals.

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CLEFT PALATE.—It is not necessary to wait till a child is one or two years old to operate for cleft palate. I do not hesitate to operate on a child of three to six months if it can have the proper attention.—*Broca.*

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TUBERCULOSIS IN GERMANY.—The Imperial Health Officer at Berlin is reported as stating that he has found evidence of tuberculosis in the body of every third person between the ages of 15 and 60 years examined by him.—*Jour. Am. Med. Ass'n.*

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ALUMINUM CROWNS.—Here is a question propounded to one of the American Journals. An aluminum crown being fitted to a root, was noticed to have a white, fluffy deposit upon it when removed from the mouth. The cusps were loaded with ordinary amalgam and the crown immediately cemented on with oxyphosphate of zinc. Patient complained of a sour, metallic taste. The same day he returned, the crown feeling and tasting very unpleasant. Upon entering the office he pressed the crown with his tongue, when it came off. He lifted it from his mouth, when it immediately became so hot that he could only hold it by letting it drop from one hand to the other rapidly. After a short time the heat subsided, when the crown was found to be riddled with holes. What was the chemical action? What caused it?—*Brit. Jour. Dent. Sc.*

work of this kind must be perfect from the beginning; the root must be properly prepared, and the band fitted perfectly; then a good foundation to begin upon has been secured. There are more failures from imperfectly fitting bands than from most any other cause. Another cause of failure is from the use of too soft a gold, for I do not believe that a durable crown or bridge, that will stand the wear and tear of mastication, can be made of twenty-four carat or soft twenty-two carat gold, although the claim has often been put forth that the soft gold was the best, as it was so much easier to adapt to the roots. The short experience that I have had proves to my mind that too soft a gold will not make a crown or bridge that will stand the immense strain that is put upon it during the process of mastication.

Now take into consideration the strain on the centrals and laterals from 60 to 100 pounds, cuspids from 85 to 125 pounds, bicuspids from 125 to 200 pounds, and sometimes more. Does any one imagine that soft gold will stand that strain? If he does he makes a mistake, and he may find it to be a rather costly one. A few months after putting on, a bridge will return, not the nice appearing one that has been put on, with the articulation correct, but a bridge that has sagged in the middle, and it will be found that the change, due to the force from mastication, has caused the abutments to incline toward each other, also that the bands do not fit at the gingival margin. In fact, after a few months' wear, it does not look artistic at all. The patient is not in love with it, and goes to some one else to see what can be done with it. Another point that is ofttimes neglected or overlooked in making a bridge, is that of cleanliness. There are very few permanent or stationary bridges that are self-cleansing, especially those that include the bicuspids and molars? Most of these are made with the neck of the facings or dummies resting on the outer side of the alveolar ridge, with the under surface concave, trusting to the tongue and a toothbrush, that you cannot get in there with, to keep the space free from all collections. I do not imagine that the smell or taste from them is very artistic. Now would it not be better if the underpart of the bridge were made flat and the surface continuous, with plenty of space between the bridge and the alveolar ridge, so the patient can take a toothpick and keep the surface clean in this way, not giving them a

chance to complain of the foul odor and taste that comes from it. I wish that I were enough of an artist with the crayon or chalk, to picture some of the inartistic and unmechanically constructed bridges that are put into people's mouths, but I am not. Now if a patient presented himself with a central incisor gone and wanted one bridged in, would it be satisfactory to us, if we wished to do the best for ourselves and our patient, if we took a facing, and soldered to each side a band that would slip over the incisal edge of the central and lateral, without paying any attention to the fit of the band at the neck of the teeth, and cemented it in place? I think not, but yet we see them. Here is a sample of a bridge made on that plan, except that this one is made to bridge the bicuspid space. This may be artistic, but I fail to see it, and I am sure the patient does not see it when he finds that he will have to lose at least one tooth. Of course he speaks well of the dentist who made it.

Another style of a small bridge that is used quite extensively, is a lateral incisor or bicuspid swung on to an open faced shell that fits over the cuspid; unless perfectly fitted the state of affairs will be something like this (drawing). When one depends upon the cement to hold crowns or bridges in place, he "builds upon the sands," for the cement will wash out, and "great will be the fall" of that crown or bridge. Another piece of artistic work ofttimes will be noticed in the mouths of respectable women, the incisors and cuspids of whom are replaced by glaring gold shells. When this work is being done, the women do not know that such things are characteristic of the women of the street, but sooner or later they will want to know if a change cannot be made, as they do not think so much gold in the front of the mouth looks very well. If sufficient care be taken with the work, sufficient consideration given to the strain upon the abutments, these end piers prepared carefully, the bands fitted perfectly, sufficient care taken in selecting the right shade of teeth, the proper occlusion and expression obtained, then with proper use of blowpipe and solder we may expect to have a piece of work that will be perfect mechanically, and also artistically, and I am sure, that if the patient takes a drink of ice water, that the difference between the temperature of the mouth, and the temperature of the draught will not "crack the china off."

*The Dental Register for June, 1896.*

"DENTAL CARIES DURING PREGNANCY," by H. F. Vandervoort, D. D. S., read before the Odontological Society of Cincinnati. It is generally accepted that the teeth of women are more liable to become carious during pregnancy, and while this condition has been much talked about I do not find anything recorded on the subject showing the relationship between dental caries and pregnancy. I have made no record myself of such cases, but have taken this subject for my paper that I may learn something of a condition or subject that should have our attention. As for dental caries, I believe the chemico-parasitic theory, of which Dr. Miller is the exponent, is generally upheld, at any rate he has shown positively that under certain conditions there is a ferment of a vital or living nature present in the human mouth, and this ferment has the power of self-reproduction. The product of this ferment is lactic acid, which deprives the teeth of their lime salts, and these micro-organisms can live and flourish in the interior of the decalcified mass of tooth structure. Now we all know how they begin business. They first, of course, find a suitable location, which is, in some fissure, or at some point not properly cleansed, where they secrete the acid, when the enamel is alternately decalcified, and the dentine reached which is soft, and then assisted by the dental tubuli, the interior of the tooth is very quickly reached. This is a brief description of the theory and shows that the influences are directed from the exterior, but in the case of pregnant females, I think the influences are directed from the exterior and interior both, and at the same time, it is said it is due to the neglect or a lack of attention at that time. That certainly has a great deal to do with it, but we find that the patients suffer from ocular trouble and numerous other nervous disorders, and while the condition generally excites a high nervous tension, or we might say, is very displeasing to the nervous system when the patient is easily excited and worried and is troubled with nausea. Now we find a change in the oral secretions which furnishes a more suitable soil for the development of micro-organisms, and from lack of attention, such as proper cleansing and use of a suitable mouth-wash, the organisms have nothing to interfere with their progress of destruction, and from the nervous condition nature is weakened and is unable to protect the organs from

within. It is thought by some that through the demands of the developing fetus the lime salts are abstracted from the teeth; this, however, I do not believe, for my knowledge of the histology of teeth does not show any place of absorbing the lime salts from them or how carried from the teeth to the fetus. It may be done, yet since the teeth receive nutrition from the blood it would seem that nature was cruel indeed to cease giving nutrition and even rob them of so important a part. It is also thought that if the teeth were diprived of nutrition other bones would suffer too, has it been proven they do not? I think, probably, they do, but on account of the predisposition of the teeth to caries they suffer most. Now, to conclude, I will say the family physician generally knows of the condition first, and I have avoided mention of treatment, for generally when we are called on, we only have to treat acute conditions and the treatment would be governed by the case in hand.

*Items of Interest for June, 1896.*

"A Remarkable Case of Necrosis," by W. W. Rowe, D. D. S., Greensboro, N. C. In April, 1892, Mrs. M— came to my office with the left upper central incisor badly abscessed and very loose; the left second bicuspid was also abscessed, and intervening teeth loose; the gums were purple and swollen, and the breath fetid. This condition was caused by a sleeping child throwing up its arm and striking the mother a violent blow on the mouth, loosening the teeth and causing the gums to bleed profusely around the necks of the teeth; the soreness, however, passed away in a day or two, and there was no further trouble till it became evident that the central incisor and second bicuspid were abscessing.

I decided to first extract the central incisor, and an abscess as large as a pea rolled out of the cavity, followed by a protrusion of bone, which I removed with a pair of pliers, and it proved to be a thin piece of necrosed alveolus about three-fourths of an inch in length. Further exploration revealed numerous other pieces of necrosed process and bone. A curved explorer could be passed through a pus channel over the lateral, cuspid, and first bicuspid to the abscessed second bicuspid, which I next removed, and pumped phenol-sodique, full strength, through the artificial opening. I dismissed the patient, feeling satisfied that at the next

sitting the three other teeth involved would have to be extracted.

The patient returned in a week, several pieces of necrosed bone had worked through the pus channel and down through the sockets where the teeth had been removed. She had used faithfully an antiseptic mouth wash I had prescribed. Examining, I found the gums had assumed a healthier condition, but the lateral cuspid and first bicuspid were detached from the process posteriorly, but the three teeth were firmly united in a solid block to a thin plate of the anterior process, so that by taking a lancet and splitting the membrane back of the teeth they could have been removed simultaneously in a solid block. Taking hold of the three teeth and rocking them gently, the sharp edges of bone could be felt to crepitate.

A consulting physician told the patient that she would have to "go North and be treated by a specialist for necrosis of the superior maxilla." I determined in the meantime to give all the palliative treatment I could, and first detaching all the necrosed bone I could reach, I pumped peroxid of hydrogen freely and liberally through the pus channel, giving same treatment at each sitting and gradually getting rid of all necrosed bone. Finding the treatment creating so marked an improvement and the drainage so perfect, I dissuaded my patient from having an operation performed, feeling assured that I could effect a cure. The treatment was the usual one, and there is nothing remarkable to record about that—but the result, I think, is almost without a parallel. Eight weeks ago, and four years from the time the accident occurred, an impression was taken. Wonder of wonders! The lateral, cuspid and bicuspid have moved in solid phalanx and joined company with the right central incisor, and are as immovable as if they had originally grown there, the gums are solid, rosy-hued and healthy, and the teeth show no signs of dead pulp.

*British Journal of Dental Science for June, 1896.*

"ORAL SURGERY," by Edmund W. Roughton, B. S., M. D. (Lond.), F. R. C. S. Eng. Syphilitic Affections of the Mouth. The mouth may be affected in all three stages of syphilis. Primary syphilitic sores are by no means rare upon the lips. They have also been observed upon the tongue, on the tonsil and on the gum. These erratic chancres are usually circular and dis-

tinctly elevated above the surrounding mucous membrane, and are often indurated; the neighboring lymphatic glands are much enlarged and very hard, often forming a mass of considerable size in which the shape of the individual glands can be readily made out. Primary chancres in unusual situations often assume extraordinary characters, which are so diverse as to admit of no terse description. In such cases the correct diagnosis is apt to be missed, unless the possibility of syphilis is suggested; it is therefore a good rule in practice to suspect that any sore of peculiar appearance, and which defies diagnosis, may be a primary chancre; the diagnosis can then be easily confirmed by the co-existence or subsequent appearance of signs of secondary syphilis.

In secondary syphilis the most important lesions are the mucous tubercles or plaques and the ulcers to which they give rise. The favorite seats of mucous patches are the lips, angles of the mouth and edges of the tongue; they are also seen on the cheeks, gums, and hard and soft palate. The appearance of mucous patches varies considerably, and depends upon the amount of irritation or damage to which they are subjected by the teeth, etc. They are best seen in their unaltered condition on the dorsum of the tongue near the circumvallate papillæ or on the under surface of the tip. A typical mucous patch is round or oval in shape, of a greyish white color, and raised above the level of the surrounding parts; its border is sharply defined and usually somewhat sinuous or wavy. The surrounding mucuous membrane presents a perfectly natural appearance. The surface of the patch may be quite smooth or it may be intersected by cracks or fissures; sometimes it may assume a warty or cauliflower-like appearance. In situations where the patches are exposed to injury (for instance, on the edges of the tongue and the inside of the cheek near the teeth) the appearances differ greatly from those just described. The outline of the patch, whilst roughly retaining its oval form, becomes much more sinuous and is surrounded by a red areola about an eighth of an inch in breadth. The surface of the patch becomes ulcerated and grooved, or marked by alternate red and white lines. The entire tubercle is not usually destroyed, but the central part breaks down, producing a sinuous ulcer surrounded by a pearly-white rounded smooth border. If the patient be in bad health, and if the irritation be continued, the ulcer may ex-

tend and assume formidable dimensions. Mucous patches and ulcers may remain unaltered for a considerable time unless efficiently treated, but they sometimes disappear spontaneously. They are usually sensitive and give rise to pain in eating, speaking, or smoking; there may be slight salivation, but an offensive odor is very seldom noticed.

In the tertiary stage of syphilis gummata may develop in various parts of the mouth; they are rare in the mucous membrane of the cheeks, and are hardly ever seen in the floor of the mouth, but they are fairly common on the hard palate, where they are particularly prone to break down into round or oval ulcers involving the bone, and leading to perforation (see Syphilitic Necrosis). Gummata are more often met with in the tongue than in any other part of the mouth; they may occur in the mucous membrane or in the muscular substance. When occurring in the former situation they are usually small and multiple, being about the size of a small shot or pea, and feeling hard to the touch and somewhat ill-defined in contour; the epithelium over them may be natural, or if they are very superficial, may be smooth, owing to the papillæ getting rubbed off. So long as they are not irritated they are painless and apt to escape notice, but when irritated they inflame and break down, leaving small superficial ulcers. When numerous these ulcers may cover a large portion of the surface of the tongue, giving it a fissured and furrowed appearance; they are very chronic, especially when inadequately treated. When they heal they pucker the surface of the tongue, causing great disfigurement.

The deep or parenchymatous gummata may occur in any part of the muscular substance of the tongue, but are nearly always found on the dorsum, especially near the centre. They may be quite small, or as large as a walnut. They produce rounded or oval tumors not very well defined, very indolent, and causing little or no pain. As they mature they approach the surface and soften; the mucous membrane over them becomes smooth and red, and eventually perforated by a small circular aperture which quickly enlarges by melting away of its edges until a deep cavity with ragged sloughy sides is exposed. The size of the ulcer is only fully appreciated when its sides are separated by the finger.

The *treatment* of syphilitic affections of the mouth necessitates the administration of internal remedies suitable to the stage at which the disease has arrived. In primary and early secondary syphilis a course of mercury must be prescribed; one of the most satisfactory preparations is the hydrarg. cum creta in doses of 2½ grains three times a day. In cases of late secondary or early tertiary syphilis the administration of mercury must depend upon the severity of the disease, the presence or absence of syphilitic manifestations in other parts of the body, and the amount of mercury the patient has already taken in the earlier stages. In tertiary affections iodide of potassium is essential. It should be given at first in doses of 5 grains thrice daily, the amount being gradually increased up to 30 grains three times a day, or until the desired effect is produced. In early tertiary syphilis, especially when there is doubt as to the previous administration of mercury, this drug may be advantageously combined with the iodide.

Local treatment is of more importance and attended with greater success in secondary than in tertiary affections. Mucous patches and ulcers should be painted three or four times a day with a camels-hair brush dipped in a solution of ten grains of chromic acid to one ounce of water. Under this treatment they usually disappear in a week or ten days. Various local remedies may be used for tertiary ulcers, but it is not possible to predict which one will prove most useful; each must be tried until the most suitable is discovered. The following are those in common use:—nitrate of silver, alum, sulphate of copper, bicyanide of mercury, honey and borax, chlorate of potassium, tannic acid, and Mandl's solution (Pot. Iod. grs. 30, iodine pur. grs. 5, acid carbol. grs. 5, glycerine ounce).

It is important that all sources of irritation should be removed as far as possible. The food should be plain and unirritating, smoking should be given up, and alcohol used but sparingly and well diluted. The condition of the teeth should be carefully attended to, and the wearing of artificial dentures suspended.

Lastly, it is of great importance to remember that primary and secondary affections of the mouth are highly contagious. Many cases are on record of syphilis conveyed from person to person either by direct contact or indirectly by means of instru-

ments, drinking vessels, etc.; dentists have acquired syphilis by scratching the finger on the teeth of persons suffering from the disease. It is therefore very important that patients should be cautioned as to the risk of infecting others, and that dentists and others operating on the mouths of infected persons should be scrupulously careful in disinfecting their hands and instruments.

*Tubercular Affections of the Mouth.*—Tubercular disease of the mouth is comparatively very rare. It may affect the tongue, the cheeks, or the hard and soft palate. The tongue is the part most frequently, and often exclusively, affected. The disease may be *primary* or *secondary*. Primary tubercular ulcers of the tongue are very rare indeed,but ulcerations secondary to tubercular affections of the lungs and larynx are much more common. Tubercular ulcers of the tongue may commence by the breaking of a small vesicle, by the formation of a small yellow point or patch, or in an abrasion caused by rubbing of the teeth. They may occur on any part of the tongue, but are most often seen on the tip and borders. The fully developed ulcer has no characteristic shape; it is usually roughly oval with sinuous borders, uneven pale granulated surface covered with a dirty yellow viscid mucus, and sharply cut or bevelled edges. The ulcer is sometimes surrounded by a number of very small greyish-yellow points, or elevations, or, if they have broken down, minute ulcers.

The ulcer is at first not very painful, but as the disease advances it becomes more and more painful and sensitive to touch. Salivation is well marked in the later stages. As time goes on the sore increases, and the patient's strength fails. Sloughing may occur. The glands under the jaw are often, but not always, enlarged. The natural termination of the disease is death from exhaustion and pulmonary disease. Occasionally a tubercular ulcer heals, at any rate temporarily.

*Treatment.*—Primary tubercular ulcers should be excised whilst they are still small, and if possible before they have infected surrounding parts. In such cases there is a possibility of a permanently good result. Even in secondary tubercular ulcer excision may be practiced, if it is of small size and the patient in sufficiently good condition to stand the operation. In such cases the operation is advised, not with a view to cure, but to save the great suffering which the ulcer itself causes. The cautery is some-

times used for the removal of these ulcers, but it has no advantage over the use of scissors.

In cases unsuitable for operation great care should he taken to remove all sources of irritation, and mastication must be rendered as easy as possible by due selection and preparation of the food. It is sometimes even necessary to resort to the use of nutrient enemata, owing to extreme pain in taking food by the mouth. All local applications should be non-irritating. Most benefit will result from the use of cocaine painted on the surface of the ulcer, or of a powder composed of iodoform (gr. i.), borax (gr. iii.), and morphia (gr. 1-6), blown upon its surface after cleansing with absorbent cotton wool. The constitutional treatment resembles that of other tubercular affections.

"Report on a Case of Re-United Fractured Human Tooth, with some Remarks on the Healing of Wounds of the Dental Pulp," by Mr. Storer Bennett. In December, 1888, Mr. W. E. Harding presented to this Society an upper incisor, which had been fractured across the crown, and which he had abstracted from the mouth of a girl 17 years of age, only three or four days before he presented it. The history of the patient was that some ten months previously she had fallen down, striking the tooth and driving it high up into its socket. It became impacted and remained fixed in its position, causing more and more irritation up to the time that Mr. Harding saw it. The pain gradually became so intense that there was nothing to do but to remove the tooth. He then discovered that it had been fractured across the crown, in a direction obliquely upwards and backwards. I was asked to make a microscopic examination of the specimen, and, therefore, removed a vertical section from front to back of the tooth, and the slide now exhibited shows the two outer halves remaining. It was seen that the broken portions of the specimen, though separated by a considerable interval, were firmly knit together by some calcified material which occupied the central portion of the gap. The margins of the space, however, being occupied by a substance of leathery consistence, were not calcified at all. Examined microscopically, the uniting substance was seen to consist of a calcified material of a spongy or cavernous character, with numerous spaces for blood vessels. The cavernous

spaces had apparently been occupied by a substance somewhat resembling pulp, though I do not wish to affirm that it was pulp. In various positions slight absorption of the edges of the normal dentine has taken place, the spaces thus formed being filled up by cementum showing well-marked lacunæ and canaliculi. The amount of cementum, however, is not very great.

The next slide is a magnification showing the intermediate tissue. Spaces are seen which have been occupied by blood vessels, and from the black masses little tubes here and there may be seen passing, but there is no space where one can make out a distinct brush of tubes going off, as one would expect if a mass of dentine were present.

The next slide shows a smaller portion of the same thing more highly magnified, but I do not know that it adds any greater amount of clearness to the idea of the specimen. An examination of the specimen suggests to one's mind two different sources for the supply of this new material, either pulp or periosteum. The pulp was exposed, but only to a very slight extent, and, of course, it is possible to imagine that enlargement took place, that the overgrowth of the pulp filled up the space between the two fragments somewhat similarly to the way that chronic enlargement occurs in cases of polypus of the pulp, and that ultimately this calcified.

On the other hand, we have evidence that there is cementum in the section, lacunæ and canaliculi being present in certain parts in rather large numbers, and we have *not* the evidence of any definite dentine structure asserting itself. We know that bone may be produced from many tissues other than those which naturally give rise to it. We have here, I think, a case in which hæmorrhage having taken place, a natural capping of the exposed pulp occurred, somewhat similarly to the way a wound heals under a scab. Blood was poured out between the fragments, organization took place, numerous blood vessels were produced, and ultimately calcification occurred, and eventually, if it had been left long enough, I think the whole of the space would have been filled up with calcified material more or less resembling bone, or bone and cementum together. There are many specimens described where cementum has united a fractured tooth in the root, but I think we have here to do with a specimen unlike

any other that has been figured or described, in so far as the cementum has been deposited between the fractured portions of the crown. I regret the report has been so long delayed. I ought to have presented it years ago, but perhaps there is one fortunate circumstance connected with it, and that is that Mr. Tomes has come across a fractured tooth which will compare with this, and no doubt we shall listen to some very interesting remarks from Mr. Tomes in the comparison of his own specimen with this one.

*Journal of British Dental Association for June, 1896.*

"PORCELAIN CROWN WITH A GOLD CAP," by Mr. T. H. Elliott, L.D.S., Glasgow, read before the Southern Counties Branch, at Brighton, April 18, 1896. The time consumed for this operation was about an hour and a half. The tooth, a right upper lateral incisor, was cut down almost level with the gum, trimmed, and the circumference ascertained by means of silver suture wire twisted round the root. A narrow strip of gold was bent round and soldered to form a band, carefully fitted to the root and cut down very narrow in front, being well pressed up under the gum. It was then removed, and a top of slightly thinner gold soldered to it to form a cap. The root canal having been enlarged with a pin-sized drill, the cap was replaced in position and burnished over root, thus indicating position of canal as a guide for the drill in piercing the gold to receive the pin. The pin, a piece of tube pin wire, was fitted in the root to the required length, marked with an instrument at its junction with the gold, and then withdrawn; the cap was next removed, and the pin waxed to it, the length indicated by mark and soldered.

The perpendicular of the pin is not of so much importance at this stage, as, the gold top being comparatively soft, it will assume the right direction when forced into position.

The surface of the root being finally trimmed level with the gum, the cap was placed into position by grasping with pliers that portion of the pin which projected from outside the cap and pressing well home.

A plaster impression was taken with the cap *in situ*, removed, and the cap placed into position in the impresssion. This was cast, a little colored soap lather being used to prevent adhesion, and when set, taken off by removing small pieces of the plaster,

until the colored portion was exposed. The cap now occupied the exact position on the plaster model as it did in the mouth, and was not removed until the crown was finished, the tooth being backed, fitted, and soldered, on the model, the latter being nearly all cut away except the two teeth adjoining the artificial one; a little plaster was run over the latter, and the two plaster teeth dried, heated up, and soldered in the usual way.

"Some Points in Connection with the Bacteria of the Mouth," by Dr. Washbourn, (paper prepared by himself and Mr. Goadby), read before the Odontological Society of Great Britain, June 1, 1896. They stated that they had been especially interested in the relation of the streptococci found in the mouth to those occurring in septicæmic conditions in the human subject, and had made a number of observations in that connection. Continuing, they said:—

In the course of our investigations we have examined the mouths of a large number of healthy and sick individuals, so that we have attained a fairly extensive practical knowledge of the bacteria of the mouth.

The importance of diminishing the number of bacteria in the mouth is due to the undoubted fact that caries is caused by their agency. It is well known that caries occurs most frequently in those who neglect their teeth. There are no doubt other causes which favour the production of caries, such as an imperfect development of the teeth, a deficient calcification, and so on; but these are only predisposing causes, and without the agency of bacteria caries does not occur.

After referring to the various species of bacteria usually met with in the mouth, they remarked:—We have isolated a bacillus which agrees in its microscopical appearances with that described by Miller as the leptothrix buccalis maxima, and which differs from the bacillus buccalis maxima in not staining with iodine and lactic acid.

There is abundant proof that bacteria pathogenic to the human subject are frequently found in the mouth of healthy individuals. The *diploccus of pneumonia* has been found in a large number of the cases in which it has been searched for. The best method of isolating it is to inoculate mice with saliva and to

make cultivations from the blood after death. This micro-organism is the cause of acute lobar pneumonia and of some forms of pleurisy, cerebro-spinal meningitis, otitis, and other diseases in the human subject.

The *dipththeria bacillus* has also been found in certain cases. On several occasions one of the authors has found virulent diphtheria bacilli in the mouths of perfectly healthy individuals, or in patients convalescent from scarlet fever and with no symptoms of diphtheria. In one case it was present several weeks in the mouth of a healthy individual. The virulence was tested upon an animal and found to be high.

Among the pathogenic bacteria that have been found from time to time in the mouths of healthy individuals, we may mention the streptococcus pyogenes aureus, and the streptococcus pyogenes.

The occurrence of pathogenic bacteria in the mouth is of great interest. It throws light upon the spread of disease, and shows how an apparently healthy individual may convey disease to another. It, moreover, shows how carefully dental instruments should be disinfected after use. But apart from these practical considerations there is the theoretical question—how a virulent bacterium can remain in the mouth without producing disease. This is, without doubt, due to the individual being immune. A bacterium only becomes pathogenic when it is virulent in relation to the susceptibility of the individual. The same bacterium may be harmless to one individual and yet produce disease in another.

With regard to the question of the presence of pathogenic streptococci in the mouth, the evidence is conflicting; some observers state that pathogenic streptococci are frequently present, others say they are seldom present; while a third series of observers maintain that a streptococcus is commonly found in the mouth which is non-pathogenic, and which is a different species to the pathogenic streptococcus.

We have made a number of observations in this direction. On making microscopical examinations from various regions of the mouth, we have been struck with the frequent presence of masses of cocci. They are generally to be found on the tonsils and gum margin, and invariably on the mucous membrane of the buccal

sulcus; we have found them present in the mouths of eighteen healthy individuals we have examined. These cocci are often found lying upon squamous epithelial cells; as a rule the cocci are arranged in the form of diplococci, but sometimes short chains are to be seen. The individual cocci may be elongated, giving them the appearance of short bacilli. Now by making cultivations from the buccal sulcus, where these cocci are always present, we have invariably obtained cultivations of strepcocci, which we have no doubt are the same as those seen in the microscopical preparations; that the cocci are arranged chiefly in pairs in the mouth and chains in the cultivations is quite consistent with what we know of the morphology of streptococci.

The method we have adopted is the following: a little of the scraping of the mucous membrane was removed with a platinum wire, and both tubes were incubated at 31°C. for twenty-four hours; at the end of this time the broth examined microscopically showed a growth consisting of diplococci, streptococci, and other bacteria; from the broth streak cultures were made on agar. Sometimes the resulting growth was a pure cultivation of streptococci, but generally other colonies also appeared; among these the most frequent were large colonies of sarcinæ, especially in those cases in which a large amount of caries existed. Having obtained the cultivation on agar, pure cultivations could easily be obtained by inoculating a third series of agar tubes.

We have examined 24 mouths in all, 16 with perfectly sound teeth, and 8 with one or more carious teeth, and in every case streptococci were obtained in the cultivations. These observations show quite conclusively that streptococci are invariably present in the mouths of healthy individuals; they also show what care must be taken in coming to conclusions as to the signification of streptococci found in the mouth in disease. Many observers, in making bacteriological examinations of the exudation in diphtheria, lay great stress upon the presence of streptococci in addition to the diphtheria bacillus in the cultivation tubes, and they state that when many streptococci develop in the cultures the case is more severe than when the diphtheria bacillus only is present.

An exceedingly important question arises with regard to the relation of the streptococci found in the normal mouth to the

streptocccus which is the cause of disease in the human subject. Is the streptococcus in the normal mouth a harmless saphrophyte, which is only related to the streptococcus of disease by certain similarities, just as the hay bacillus resembles the anthrax bacillus? Or are the micro-organisms varieties of the same species, which are capable under appropriate conditions of being mutually convertible? Can the normal streptococci of the mouth invade the body and produce disease under circumstances which lower the resistance of the body?

We have already alluded to the occasional presence of virulent diphtheria in the mouth, and there is no doubt that virulent streptococci are also at times present. Several observers have undoubtedly found virulent streptococci in the mouths of healthy individuals, but this does not prove that the streptococci constantly present in the mouth are of this nature.

Our own observations have led us to incline to the view of Lingelsheim, that the normal streptococcus of the mouth is a different species to that producing disease.

Now to understand the difficulties in distinguishing the normal streptococcus of the mouth from that of disease, we must say something of the varieties of streptococci found in various diseases in the human subject.

Having dealt at some length on this point, they remarked: "The streptococcus from the normal mouth differs from the streptococcus longus in the following points: (1) It is non-pathogenic when tested upon rabbits and mice. (2) It produces a uniform turbidity in broth cultivations. (3) It clots milk and produces much more acid than the streptococcus longus. (4) The individual cocci are smaller, and the chains, especially in broth cultivations, shorter. The length of the chains is not always a reliable criterion. Sometimes in the impure cultivation obtained from the mouth the chains are very long, and this is probably due to the medicine being altered in composition by the other bacteria present.

The conclusions which we draw are these:—The streptococcus, if occurring normally in the mouth, agrees with the streptococcus brevis of Fingelstein, and can be distinguished from the streptococcus of disease by its biological and morphological characters. It must be looked upon as a distinct species for the present,

although ultimately this view may be proved incorrect, for it is possible that further researches may enable the streptococcus brevis to be converted into the streptococcus longus. This, however, has hitherto not been accomplished.

We think that the discrepancies of different observers who have investigated the streptococci of the mouth are partially due to the fact that the streptococcus longus is sometimes accidentally present and has been mistaken for the normal streptococcus of the mouth.

*The Milwaukee Medical Journal for May, 1896.*

"DOCTORS AND DENTISTS," by Dr. G. V. I. Brown, Duluth, Minn., Reply to Toast, Banquet of Milwaukee Medical College, April 24, 1896. Mr. Toastmaster and Gentlemen: When a young man graduated in olden times as a magician, he was required for a final test, to run through a long, dark hallway, pursued by the devil. If he escaped without being caught, all was well with him.

Now I used to be something of a sprinter, but evidently am not speedy enough to outrun Mephistopheles, for, you see, I am caught and am a victim at your service. My condition is very like the native of that Emerald Isle, the birthplace of all truly good New York and Chicago police, who, after many years residence in this country, having waxed fat and prosperous upon well-administered city contracts, went back to the land of his birth for a visit, and upon his return to this country told of a great joke he played upon the Hibernians. He said: "Won day Oi disgoised meself and wint to Kilkinny fair, and, would ye balave it, the divil a wan of thim all could tell Oi was an American." That just exactly fits my case, for, though not disguised, I am sure "the devil a one of yous" could tell whether I am a doctor or a dentist; but, whatever I am, there is one thing of which there can be no mistake: My heart, soul and mind are bent upon the drawing of dentists and physicians together in the communion of their daily practices.

Alive to the necessity of more frequent consultation, for years I have tried to spur the dentists in their gatherings and wherever possible, and now, having, as I hope, earned the right of common fellowship, I hope to bear some influence among the medical men.

They are all wonderful diagnosticians down here in Milwaukee, and when notified that the toast "Doctors and Dentists" had been assigned me, at once it became evident that my malady had been correctly diagnosed, but I felt quite sure no one understood the severity of the attack. It seems to be in a measure incumbent upon me, although a very young member of the medical fraternity, at this, my christening, to criticise some of the fallacies of the medical teaching, and as one can always talk with more confidence and freedom of the thing he knows least about, antitoxin seems, perhaps, of all topics, the most suitable for me in this respect. I read with interest the other day an article in the *Contemporary Review*, in which the writer discusses "Anti-toxin from a Patient's Standpoint," he having been treated for diphtheria in one of the hospitals, where antitoxin was used upon him in a fearful and wonderful manner. He cautions against its general adoption into practice in no unmeasured terms, saying: "The after-effects of the anti-toxin in his case, and that of others, was much more serious than the original disease. "After his so-called recovery and discharge as cured, the bacteriologist being no longer able to discover the much-dreaded bacillus, he was taken with a temporary blindness, dizziness in his head, causing him to stagger and almost fall, helplessness of his lower limbs, and a disinclination to move, amounting almost to paralysis. Though the writer refers later on to the broken-down cab horses as a medium for the production of serum, evidently, not being a horseman, it did not occur to his mind to account for the symptoms, as I, with quickness, acquired doubtless through my association with your honorable hosts and a horse experience of freer, if not happier, years, was able to do; I saw at once he had simply acquired the marked characteristics of this particular cab horse. What is more natural in cab horses than dimness of vision, head staggers and a weakness of the hind legs, to which add the natural disinclination to move, and the picture is complete. Doubtless a later report in this case will show the spavins beginning to develop, and we will find him neighing for oats. But I carried the idea still further, and wondered if, after all, antitoxin might not, like many newly advocated remedies, prove to have been used long years ago; that, if this could be proven to be true, and if donkeys had been used instead of horses, what an interesting problem of sociology it would be to thus trace out and

account for many peculiarities noticeable among our acquaintances.

There is a feeling among dentists akin perhaps to that which prompted the all-ambitious Cicero, who, when his friends said to him at the beginning of his career that the name (Cicero), which meant only a vegetable, was not sufficiently high-sounding for one with such great aspirations, and advised that he change it for one more suitable, replied, "I will keep my father's name, and will make it honorable;" and when later we find Cicero writing to the historian, asking him to give even more credit than perhaps he might think he was entitled to, we realize how heavily must have weighed the value of his name against all-powerful ambition. This in a measure voices the feeling of the dentists of to-day, who cling to the old name in preference to being called oral surgeons, surgeon dentists, etc. Doubtless this is why but a handful, comparatively, of the dentists who are doctors of medicine as well as doctors of dentistry attend the Odontological Section of the American Medical Association, a far greater number going in preference to the individual organization, the American Dental Association. Yet one of the most important steps of modern advancement in both professions was the establishment of this same section and the recognition by membership in the American Medical Association of all that portion of the dental profession who are entitled by reason of the possession of the medical degree, due directly to the efforts of the late Dr. Allport and Dr. Talbot, of Chicago, with their friends.

Many feel that overtures were not treated in the propor spirit by the physicians of the past, and that now, when advancement has perhaps been more rapid in dentistry than in any other special branch of medicine, they refused to be patronized or adopted.

Narrow-mindedness upon the one hand has begotten narrow-mindedness on the other, and, by one who would judge fairly, must be admitted on both sides; yet in my intermediate position I feel sure great forces are at work to break away even the last remnant of such prejudices. The education of dental and medical students together in the same institution is the great factor hopeful for the future in this respect. More of the medical teaching will make the dentist more familiar with the proper technical

expressions, more cognizant of the general undersanding of the medical practitioner; in short, more ready and fit for profitable consultation. On the other hand, the medical student thus educated will have a greater respect for the knowledge of his dental confere, but more than all is the power of association, the formation of friendships, the influence of his associates, for it is generally agreed that students are educated as much by each other as by the professors.

Here's to the Doctor, whose helping hand
Is the first to greet as we enter the land,
And courteous always, as ever brave,
He bids us adieu at brink of the grave;
And all the days through all the years,
He soothes the sufferer, calms his fears;
In sickness, in sorrow, in storm and cold,
His deeds of mercy are yet half told.

And here's to his brother, the second son,
The surgeon knight, the mighty one;
For lords and nobles of high degree
Are all quite well in their way, you see,
But he who, by reason of subtle skill,
Can grapple with death, defy his will;
Who daily prolongs the span of life
By the skillful use of aseptic knife,
Has reached the summit, the topmost stone,
Above all the world he stands alone.

And here's again to still another,
The babe in arms, the little brother;
But mark him well—the infant still
Has yet his mission to fulfil.
A charge has he. Some all-wise fate
Has made him the captain of the gate,
To guard and keep with watchful care,
To challenge all who enter there.
At gates of Rome a thousand men
Were stopped by three, and so again
The enemy hosts of human kind
A worthy foe must surely find,
The artist, mechanic, artisan child,
The Doctor of Dentistry once reviled,
But like the stone the builders passed,
To become the corner-stone at last.

*Journal of American Medical Association for May, 1896.*

"CONCERNING MEDICAL LANGUAGE," by George M. Gould, A. M., M. D., Philadelphia, read at American Medical Editors Association, at Atlanta, Ga., May, 1896. The writer, after pleading long and earnestly for the gradual adoption of a simpler method of spelling, showing that it must come in time, says: Specifically, the microscopic modifications I have urged here are as follows:

1. Abolish in English words the archaic, unnecessary, bothersome *æ* and *œ*, supplanting it by *e*.

2. Cease adding the tautologic *-al* to adjectives having already one adjectival suffix, *-ic*. It is already done in thousands of words; finish the job.

3. Drop the useless hyphen in words whose parts are derived from classic languages. In ten thousand words you have already done so; finish with the rest. But retain the hyphen in such compound terms as express a single idea by two semifused English words, especially when both are nouns. E. g. say *antitoxin* (not *anti-toxin*), *culdesac* (not *cul-de-sac*), *postmortem* (not *post-mortem*), *ventrofixation* (not *ventro-fixation*), etc. Keep the hyphen, because it is necessary to avoid confusion and doubtfulness of meaning, in *curet-spoon, heart-murmur, skin-disease, sleeping-sickness, etc.*

4. Drop the useless *-te* from *curet, brunet, fourchet, etiquet, cigaret,* etc. You have already lopped it off from *cutlet, doublet, quartet, quintet, sextet, septet, racket, minuet, fillet, corset, stylet, tourniquet, bouquet,* etc. Finish the job.

In the same way cut off the useless *-me* from many words, writing *program, gram, centigram,* etc., just as already we do *telegram, anagram, diagram, epigram;* let's make an end of it.

5. Use figures instead of spelling out numbers, at least those above ten.

6. Anglicize foreign terms when a goodly proportion of your readers will not understand them in the originals. Use italics as little as possible; use as few foreign words and terms as possible, because the vast majority of your audience can not understand them (even if *you* do); and because there is a deal of silly conceit in airing exotics of speech.

7. As to the spelling of chemic terms, accept the recommendations of the American Association for the Advancement

of Science, which after years of dispassionate investigation advised that we drop the final *e* in *bromid*, *iodid*, etc., and in *bromin*, *iodin*, *atropin*, *quinin*, etc. Say *phenol* instead of *carbolic acid*, *glycercol* instead of *glycerin*, etc.

8. Abolish all diereses and accents. They can not teach pronunciation, and they are useless luggage. Let us write *oophorectomy*, *cooperation*, *ptomain*, *leukomain*, etc., without the diereses. When a foreign word is Anglicized let us do it completely, and not drag over into our domain the exotics of foreign habit, leaving it, *e. g.*, neither English nor French. Leave to the poets the acute, the grave, and the circumflex accents, that are foreign to the spirit of our own tongue.

9. Do not bother about hybrid terms. A mule is a better animal than either its father or its mother. It is only finicky sticklers that are horrified by hybrid words. There are many, many thousands of them in our language, good words too, that have been used for centuries, and that always will be used. There is no earthly objection to them,—and indeed, we should rather welcome them if they are good words, expressive and short. More than any other language ours is adapted to receive them and use them, and there are more of them in it than in any other language. Instead of being ashamed of the fact we should be proud of it, as it shows our receptivity and plasticity. If we are bound to have the defects of our virtues, let us not be ashamed of the virtues of our defects.

Finally, I would beg that you carefully consider the source and secret reasons that exist for opposition to the foregoing recommendations. Ignorance, colossal, imperturbable, impertinent ignorance is characteristic of much of it. Read, for example, the letters in the *British Medical Journal* from correspondents (not editorial utterances, because the editors know better, and have publicly advised dropping the æ and œ), and you will see these objectors haven't studied philology five minutes in their lives, and are living in an antediluvian world.

But, again, consider the source, I beg of you, and you will very often find that it is the secret influence of the commercial medical publisher that is at work. He publishes a dictionary committed to the old ways, and hence prints his medical journals and books in the archaic language of his dictionary. It means expense

and loss of money to him in very many ways to have his "authorities" supplanted.

*The Ohio Dental Journal for June, 1896.*

"PORCELAIN INLAY GROUND TO FIT A CAVITY IN A TOOTH," by A. W. Harlan, M.D., D.D.S., Chicago; read before Mississippi Valley Dental Society, April, 1896. I would not presume to call your attention to such a trivial subject if the whole question of inlays had not occupied such a large place in discussions before societies during the past six or seven years. Rubber inlays, platinum inlays, gold inlays, glass inlays, and baked porcelain inlays, with perhaps some others have had their advocates and do now I suppose in different quarters. The ground porcelain inlay, however, in labial cavities, buccal cavities, and some crown cavities, to my mind furnishes us with something more artistic than any of the other methods of making or setting inlays. It is not a necessity to laboriously grind an inlay to fit the cavity in the tooth; this may be done with much greater expedition by preparing the cavity, taking an impression of it in plaster or modelling composition and getting a cast of the cavity in copper-amalgam, or Melotte's metal.

The inlay can be ground to fit the cavity to a hair's breadth, with diamond disks; undercuts and grooves may be made to provide for the flowing of the cement to retain the inlay in position. A tooth or bit of porcelain must be selected at least one shade darker than the moist natural tooth. If a porcelain rod is used it must be capable of retaining a high polish, or the difference in color will be too manifest. The edges of the inlay must not be bevelled too much or the cement will show through them. The oxyphosphates are to be preferred for setting inlays in anterior teeth; gutta-percha or sulphur may be used for crown or buccal cavities in bicuspids or molars, or in pulpless teeth. The objection to gutta-percha is its color and the tendency to deterioration in such a small space as exists between an inlay and a cavity wall.

Canada balsam may be used, but it generally requires too much time and it is liable to become yellow from the secretions of the mouth. Nothing is more artistic than a section of a gum tooth with the gum attached to replace a waste spot on the neck of a superior cuspid or superior incisor.

A gold filling always looks badly, and the thermal changes are so pronounced that the patient suffers every time the mouth is opened or a drink of water is taken, so that there can be no comparison as to the comfort of such an operation.

To more securely fix the labial inlays a small filling can be built over the edge of the inlay next the gum margins. This is done by grinding from the face of the inlay a depression of such shape that the gold can be adapted to the surface without disturbing the setting of the cement. Before setting an inlay with oxyphosphate, the cavity must be dried with ammonia fortior, and then with alcohol, and the inlay should be clean and dried in the same manner. After the inlay is set I allow at least half an hour before taking the rubber-dam from the tooth. A coat of copal ether varnish is used to protect it for a day or two. The reason I use porcelain in crown cavities in molars is that when the cavities can be made circular it is easier to fill them; there are no thermal changes and it takes less time than to use gold and it will probably last as long as gold.

"To Make a Mil-ammeter for Cataphoresis," by Dr. L. E. Custer, Dayton, O. Have made some experiments for a cheap galvanometer and find the following to answer all requirements:

Take an empty Barbour linen thread spool and wind it full of 28 or 30 gauge insulated copper wire. Mount this on a base which can be revolved horizontally. Fix a small jeweled compass on the spool. Now turn the base around till the compass-needle stands at right angles with the axis of the spools and mark off the deflections by testing in series with a standard mil-ammeter. Before each operation adjust the base so that each needle stands at zero.

"Suggestion on the Origin of Some Cases of Pyorrhea Alveolaris," by H. C. Matlack, D. D. S., Cincinnati, read before Miss. Valley Dental Society, April, 1896. We sometimes find men who will hesitate to advance an opinion which has a direct medical bearing, thinking that to be dogmatic and self-assertive without due reason is illogical and unjustifiable—which presents the spread of some thought and the solution of some great question. The following will be presented for what it is worth. I will

try to show that there are *some* cases of pyorrhœa alveolaris whose origin may be syphilitic.

On October 14, 1895, a lady, 28 years of age, presented herself for treatment on account of looseness of upper front teeth. The four upper incisors were found to be very loose, gums could be lifted from necks of teeth, pus exuding, and the general conditions present which caused a diagnosis of pyorrhœa alveolaris, although no calcareous deposit was found on these or any of the other teeth—pyorrhœa instruments being used to determine whether there was a deposit or not. The lady has been a patient of mine for several years, so that any inclination to salivary calculus or other deposits due to carelessness in cleansing the teeth would have been noticed. About eighteen months ago this lady was married to a young man who was supposed to have recovered from a severe attack of syphilis. On questioning the patient, I found that in May, '95, she had a severe case of iritis, which, by the time she was referred to an oculist, had developed into choroiditis. Now, from a number of authors, we find that choroiditis is a frequent disease in all ages, and the most ordinary cause is syphilis, both acquired and hereditary. Upon consulting a number of writers, we find that we have syphilitic iritis, choroiditis, deafness, otorrhœa or a flow from the ear, syphilitic headache, produced by the virus irritating the membranes of the brain and pericranium; syphilitic complaints in the nose, originating from the immediate application of the virus to the nostrils; syphilitic sore throat; syphilitic swelling of the bones, where may be traced one of the causes of exostosis of the teeth. The following, under the head of "Syphilitic Toothache," taken from a work published as early as 1801, shows that even then some diseases of the teeth were attributed to syphilis:

"The syphilitic virus, in affecting the eyes, the mucous membrane of the nose and throat, sometimes attack the gums, producing syphilitic toothache, which must be carefully distinguished from that produced by mercury or mercurial odontalgia." Showing that attention was called to the difference between ptyalism and some other affection of the gums, perhaps pyorrhœa. No portion of the body is exempt from the attacks of syphilis. Stanley has the following, which shows that there is such a thing as syphilitic periostitis: "Syphilis is a well-recognized cause of

inflammation of the periosteum. Systems debilitated by mercury and other drugs are thus rendered particularly susceptible to the influence of cold and moisture, and inflammation of the periosteum of one, and oftentimes *several*, bones is of *common* occurrence. The reason of this is probably because the surface of the bones, superficially situated, are most exposed to external influence, that these two are the usual seat of periostitis. Acute inflammation of the periosteum occasions *increase* of its *vascularity —thickening* and *softening* of its tissues—*loosening of its connection with the bone—serous* or *purulent effusions between it and the bone.*"

Although it appears from a clinical history and pathological changes that the diseased action is marked at the extremities of the long bones, where nutritive changes are the most active, it is not confined to the ends of the long bones, and does not manifest itself in the interior of those parts of the extremities of the bones which are not covered externally by the periosteum, which gives the conclusion that in the majority of cases the periosteum is the tissue *primarily* involved in the diseased action, the bone being implicated in consequence of the periosteal abnormalties frequently occurring either before or during eruptive stages of primary syphilis. During these early stages, although the pericementum is affected at the time, the patient is unable to localize the pain, which may be similar to locating an aching tooth; but later on, when the eruptive period of the disease is developed,the gums become excessively tender on pressure. These conditions being present in the case cited caused a further consideration of the subject. By the kindness of Dr. Evans and Ravogli, the City Hospital was visited, and twenty-three syphilitic patients were examined, eleven having true pyorrhœa. Now, to counteract the thought that there were probably cases of ptyalism, the attending physician stated that although a small amount of mercury was used, no ptyalism had been produced in any case. The case referred to in the beginning was treated in the usual methods; three of the teeth responded readily to the treatment, but the upper right lateral was not cured the last time I saw the patient.

I had intended to take up another phase of the subject, that is, that some cases of pyorrhœa alveolaris may be of tubercular

origin; but, as this paper was intended to be a suggestion only, the further consideration of the *tubercular idea* will be postponed to some future date.

Discussion. Dr. Knight: A case, in instance, occurred in a young man who some years ago consulted me in regard to an extremely offensive ozena. For some months previous to this he had been under the care of his dentist, suffering from pyorrhœa alveolaris accompanied with loosening of several of his teeth. Investigation ot this patient revealed him to be a victim of congenital syphilis. He was placed upon constitutional treatment for the disease. His improvement was steady and continuous, the pyorrhoea alveolaris, which had resisted prolonged local treatment, disappeared, and the teeth became gradually tightened.

Dr. Fletcher: My hypothesis about the matter would be after this manner. We know that the bacilli of tuberculosis (when the patient has become affected) have a tendency to form colonies in various tissues of the body, and especially the endothelial and epithelial membranes, such as the joints, the lungs and the mucous membrane of the air passages, and often in the skin, when it is called lupus; these tubercles are first invisible, when they are called granular, when a little larger they are called crude and then miliary tubercle; the last is so-called from its being about the size of a millet seed, and they may ultimately be much larger.

When the miliary size is reached, the tubercle may become caseous and then begin to break down in the center, not forming true pus, but a watery, milky fluid, just such a discharge as is often found in these pockets about the teeth. No doubt many of you have seen just this character of discharge from them. Now, the physical character of the two discharges being identical leads me to think that many cases of pyorrhœa may be of tubercular origin. This could be determined by microscopical examination of the discharge, and I trust that the essayist, or some one else, may take up this subject from this standpoint and give us some facts and statistics relating to tubercular origin, as well as the syphilitic or other cause of the disease.

*The International Dental Journal for June, 1896.*

"AN INTERESTING CASE," by Dr. S. L. Goldsmith, New York. Miss A., who at the time was undergoing some painful dental treatment, said, "Oh, if hypnotism were only advanced to such a stage that one could have the teeth filled without pain!" I replied that it was not an impossibility even now; in fact, that it had been done. The patient then expressed a desire for me to try it upon her, and with the precaution of having a third party present, I endeavored without success to hypnotize her. In the meantime I ascertained that the patient was a sufferer from insomnia, and, as I saw a greater object in view, I tried again at her next appointment and succeeded. The hypnosis was complete.

I excavated the cavities and, in fact, separated teeth with almost no pain. The method used was the so-called "mixed method,"—that is, a combination of the suggestions of Bernheim and the strokings, etc., of Charcot.

Now, having found that the patient was a good subject, and as insomnia was out of my sphere of practice, I took her to a medical colaborer of mine, who at once examined her, and finding no organic disorder which could cause her trouble, ventured a very favorable prognosis with the treatment mentioned. The physician then put her into the hypnotic state and suggested to her that she would sleep the ensuing night from ten until 6.30 next morning. At 9.30 that evening the patient was so sleepy that she could no longer hold her book, and retired. Upon awakening she looked at her watch, the hands of which pointed to 6.35. For years her limit of sleep had been three hours a night. The physician has gradually lengthened the time over which the suggestion was to have effect, until now one suggestion has given her a proper night's rest every night for six weeks. I have no doubt that this can soon be lengthened to six months, and, in fact, that in a couple of years the suggestion will not be necessary at all.

Before the commencement of our treatment Miss A. was a nervous, morose individual, who jumped every time the door-bell rang. Since the treatment she has materially gained in weight and is as happy as a well-nourished young lady should be.

"THIRD SET OF TEETH." The Sunday *Herald*, of Syracuse, New York, reports a case at considerable length of one James Slattery, of that city, who has apparently erupted late in life a portion of the full denture, with the prospect of more teeth presenting in the near future. Dr. S. B. Palmer, of Syracuse, made an examination of the case and reports as follows:

"In the inferior maxilla are eight teeth located as follows: four incisors and two cuspidati corresponding with the cuspidati of the superior maxilla, and two small bicuspids on the right side. The cuspid on the left side and the second bicuspid on the right side are somewhat loose. The alveolar process does not extend up and entirely around the roots. The other teeth are firm and of usual size and length, but are somewhat overlapped from crowding and discolored by smoking; in other respects they present the appearance one would expect at his age.

"On the left side, in place of the two posterior teeth ordinarily found, are three parts of teeth, resembling roots, having grown up partially out of the gums. They are not firm or well-developed teeth. The man insists that they also appeared within the time mentioned, two years previously, and that they belong to the same set. One is loose and turned against the cheek, and will require extraction. The other portions of the jaw show no signs of further eruption of teeth, as considerable absorption has taken place.

"An examination of the superior maxilla shows that the third set, more numerous than those in the inferior, will soon make their appearance. The jaw is thick and full nearly all the way back, raising the lip and giving the fullness peculiar to a child's jaw of six or seven years, or about the period of the eruption of the teeth of the permanent set."

The history of this singular case is briefly as follows: James Slattery is a well-developed man of six feet two inches and weighing two hundred and thirty pounds. At the age of eighty-seven he was edentulous, having lost his second set of teeth. At about this period he noticed a painful condition of the gums, or, as he expressed it," they began to ache badly," and for two years they continued to erupt in the inferior maxilla, and will, in time, develop in the superior.

This seems the best attested case of third dentition we have

met with on record, and it is hoped Dr. Palmer will secure testimony as to the character of the set prior to becoming edentulous through advancing years. The dental profession has regarded a third set of teeth as a myth, and with some reason, as most of the so-called third sets have proved, on investigation, to be simply delayed dentition of the regular second set.—[ED. *International.*]

*The Dental Cosmos for June, 1896.*

"THE X RAY AND ITS APPLICATION IN DENTISTRY," by William James Morton, M. D., New York City, read before the New York Odontological Society, April 24, 1896. The application of the X ray will, I believe, greatly aid the art of dental surgery. In general surgery it is difficult to overestimate the importance of ascertaining the exact outlines of imbedded bones, or foreign bodies, to differentiate between a dislocation or a fracture, or to ascertain the co-existence of both. The X ray already makes these cardinal issues an open book; it does more, it locates tuberculous deposits now known to frequently invade the osseous tissue and to be impossible of detection except by exploratory incisions; it locates also sarcoma and accompanying erosions of the bone within the narrow cavities, and it is more than possible that, thanks to the labors and the practical mind of Edison. these triumphs of localizing and diagnosticating records upon photographic plates will be supplanted, at least for quick and ready examinations, by the new art of X ray fluoroscopy. It was one thing to note that fluorescent substances outside of a tube were excited, it was quite another to find a working fluorescent substance and build it into a practical screen. This Edison did, and the efficacy of this screen and its revelations grow apace; its definition and degree of illumination increase week by week. Tesla already reports that he has seen through three men, that he has seen the great bones of the body, and seen the heart beat. Again and again I have looked through the human body and seen not only the vertebræ, the ribs, the hip-joint, but also located larger and denser organs like the liver; nay, more, I have watched the heart in its beatings. Who can guess to what lengths the visual exploration of our interior organization may reach when so much is already possible?

This enumeration, brief as it is, is a great triumph for the X ray, and these same questions of diagnosis and of localization are equally applicable to dental surgery.

The radiographs presented to you here to-night are but a first step toward taking pictures of the living teeth. They open out to your view a wondrous field for investigation and study and diagnosis. Each errant fang if distinctly placed, however deeply imbedded within its alveolar socket; teeth before their eruption stand forth in plain view; an unsuspected exostosis is revealed; a pocket of necrosis, of suppuration, or of tuberculosis is revealed in its exact outlines; the extent and area and location of metallic fillings are sharply delineated, whether above or below the alveolar line. Most interesting is the fact that the pulp-chamber is beautifully outlined, and that erosions and enlargements may be readily detected. A new method of studying pathology in the living subject is laid before you.

To what perfection, gentlemen, may not the science and art of dentistry reach if some of the new things which press upon your attention are fully realized. Already painless dentistry is within your grasp by aid of electricity and simple anesthetics, and now the X ray more than rivals your exploring mirror, your probe, your most delicate sense of touch, and your keenest powers of hypothetical diagnosis.

*The Dental Review for June, 1896.*

"Shock," by Garrett Newkirk, M.D., Chicago, read before the Illinois State Dental Society. One of the best articles upon the subject which I have ever seen is that contained in the first volume of the "American System of Dentistry," division of General Pathology, page 719, written, as you know, by one of our own number, Prof. Black. I shall take the liberty in this paper to quote from this article somewhat freely.

Dr. Black's definition of shock is as follows: "Shock is a sudden and notable depression of the vital powers resulting from an injury more or less grave, or from an impression made on the nervous system through the medium of the sensorium, as by fright, sudden and overpowering mental emotion," etc.

We may say, to enlarge a little upon this definition, that whatever is capable of producing a sudden and profound impression

upon the mind, or upon the nerves, may result in serious shock; that any sudden impression which causes more or less pain or abnormal disturbance of the circulation may be said to be of the nature of shock.

The state of prostration which follows upon one overpowering blow, whether the blow be primarily mental or physical, may also be induced by a large number of successive small shocks extending over a considerable time, as of several hours. The term *collapse*, as it seems to me, is not synonymous with *shock*, but belongs rather to the last stage or sequence of shock.

In the domain of general surgery shock is a matter of grave importance. Here it may be divided into two classes: 1. Shock produced by accidental injuries which require the attention of the surgeon. For a long time it was a matter of common observation, but not understood, that injuries of a certain class were often followed by collapse and death. That in other cases injuries more extensive were followed by speedy reaction and recovery. This was specially noticeable in the department of railroad surgery, where instantaneous crushing force is so often the cause of injury. To these observations, probably, we owe much of the more recent development of thought in this direction.

2. A surgical operation, undertaken though it may be for the relief of injury, is itself to be considered as an injury in relation to shock.

The idea of shock must not be confounded with that of pain. They are often associated, but they are distinct and separate things. The injury that produces shock may at the same time cause pain. The sensation of acute pain, or the mental fear and dread of pain, may and often does induce shock; or the shock of pain or of emotion may be added to that of physical injury.

But the victim of severe and dangerous shock may be entirely unconscious of the injury received. He may be stunned by the same force which produces the lesion, or in such a state of excitement as to know no pain, and yet be found within a few moments in a state of collapse. Here the discovery and general use of anesthetics has been of great value, in that it has made it possible to subtract the elements of emotion and sensation from the sum total of shock impression. However, this subtraction is not

without possible counter-addition, in that the anesthetic itself may have serious depressing influence, so great in some instances as to overbalance its benefits.

The immediate danger in shock appears to be in its relation to the vascular system. Through temporary paralysis of the vaso-motor nerve centers, there is extreme dilation of the arterial vessels generally, and it is supposed that in fatal cases death results, not so much from failure of the heart to act, but because blood is lacking for the heart to act upon, and, as Dr. Black remarks, the patient "bleeds to death without the loss of a drop of blood." The heart is emptied into the relaxed blood vessels.

Therefore, the first and most prominent symptoms of shock pertain to the circulation of the blood. There is first pallor of the countenance, a weak and small pulse followed by dullness of the senses, a staring eye, numbness, coldness of the extremities, lack of will and muscular power. Questions are answered by monosyllables or not at all, there is partial or complete loss of consciousness, in short, collapse.

In this connection, I desire to mention a cause of shock which, as I believe, has been but little recognized as such, namely, the action of drugs. I have a patient who exhibits all the primary symptoms of shock if a bottle of chloroform be opened in the room. A friend of mine has a patient similarly affected by camphor. These are examples of idiosyncrasy, but there are agents, deadly poisons we call them, which cause death apparently by shock pure and simple. They so impress and suddenly paralyze the vaso-motor centers that the heart is bled to death by the relaxed blood vessels. Possibly this is what cocaine and other agents of that class probably do.

It is my opinion that extra susceptible children or young people should not be kept in the chair as a rule more than half an hour at a time. Adults (usually they are women) not more than an hour, as much less as may be. We prepare too many cavities and fill them at one sitting. We do not use temporary stoppings of gutta-percha as frequently as we should, waiting for recuperation from shock. We think possibly not too much of teeth, but too little of the individual behind the teeth.

# Letters.

## AN EARLY DEMONSTRATION OF CEMENT AND ALLOY FILLING.

BROOKLYN, July 12, 1896.

*To the Editor of the Dental Digest,*

DEAR DOCTOR:—In the February and June nos. of the DIGEST I have seen articles by Dr. W. E. Driscoll, on "Alloy and Cement for Filling."

In answer to these I send you the January, 1887, *Cosmos*, which contains my clinical report before the First District Society. "The First District Dental Society of the State of New York held a regular monthly meeting, Oct. 5, 1886. Dr. C. W. F. Bodecker, chairman of the Clinic Committee, reported as follows: * * * Dr. Reese, of Brooklyn, showed his method of inserting gold and amalgam fillings by first lining the cavities with oxyphosphate, and then, while the oxyphosphate is still soft, putting in the first layer of gold or amalgam or whatever material he may use. In this way he gets an anchorage of the gold or amalgam in the oxyphosphate. He demonstrated his method out of the mouth in teeth set in plaster." This will prove to you that I have not only practiced this theory, but that I presented it to the dental profession at that year.

By giving this space in your valuable journal you will greatly oblige, Yours truly, GEO. F. REESE.

## THE LITERATURE OF CEMENT LININGS.

PHILADELPHIA, July 7, 1896.

*To the Editor of the Digest,*

DEAR DOCTOR:—I am somewhat impressed that Dr. Driscoll is in error in supposing that the lining of cavities with cement has been neglected by the Dental Journals. The idea dates from the first use of the cements or non-metallic plastics, and has been so often noticed, and in so many ways, and used with so many objects in view, it will be difficult, I think, to devise any method of so using it really new. The old oxychlorid zinc cement was

so used as soon as introduced, about 1857–8. Dr. J. S. King, of Pittsburg, Pa., was an earnest advocate of its use. I have seen a number of fillings made by him, beautifully done on the approximal surfaces of front teeth, the mass of the filling being of cement, perfectly covered with gold malletted on, beautiful after ten or more years of service. I refer to it in a paper in the Dental Cosmos, Vol. XVII, July, 1875, page 347. Dr. Flagg advocates it as one of the approved new departure methods; indeed, an hour or two spent looking over the files of any Dental Journal will dispell the idea that it has been neglected.

In this connection I note another old idea recently revived; that of lining the cavity with very soft amalgam, then finishing the filling with amalgam containing less mercury. W. A. Roberts, M. D., L. D. S., speaks of it at a meeting of the Odonto-Chirurgical Society of Edinburgh, July 13th, 1875, (British Journal of Dental Science, Vol. XVIII, August 1875, page 431). There are a good many excellent ideas buried up in the old dental journals, journals that ought to be collected in libraries convenient of access to members of the dental profession, instead of being unbound and dust-covered in some out of the way corner, liable at any moment to be consigned to the dump, or to the kitchen fire. That we have so few dental libraries is no credit to our profession, and in many ways is a serious loss.

Yours respectfully,

WILLIAM H. TRUEMAN.

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## NEW YORK LETTER.

NEW YORK, July 18, 1896.

*To the Editor of the Digest,*

DEAR DOCTOR:—July in New York is of "unknown" doings, so far as societies are concerned. The steamers have carried many of of our New York dentists across. Dr. Kingsley will spend some time in Dresden, as the guest of Dr. Jenkins, and will read a paper before the American Society of Europe, on "The Correction of Facial Deformities." Dr. Northrop has migrated, his only desire being an absolute relaxation. It seems a pity that more of us do not take more relaxation from too close application.

Rumor has it that Prof. Frank Abbott has learned the folly of

too much work too late, for he is threatened with a serious illness and much solicitude is being expressed. He has accomplished a vast amount of professional labor during the last thirty years.

W. W. Walker has gone to London, and will doubtless secure attractions for the autumn meetings of the Odontological, and we risk the prediction that he will secure the best there is.

Dr. Benson, of New York, goes to Europe annually. He has perhaps the most settled "mechanical" practice in the country. For many years he constructed dentures for other practitioners and finally worked up a select, well-paying practice, for good fees are not wholly absolete here.

Perhaps it is partly true that the days of liberal remuneration have passed, but there is a small class who have steadily gone forward in their "special" work. We are sure that the energy which focuses round a specialty insures a fruitful harvest. There is never monotony in a specialty, every case has its fresh interest. Right here we are convinced that no calling offers such rich fields in special lines as our own profession; that is, for able, earnest young men. We again emphasize our dear Atkinson, that it requires the best of men for our calling.

This reminds us that Dr. Atkinson's collection of books, pamphlets, etc., has lately been sold at auction for a fraction of its value. We feel that notice of the sale should have been widely circulated, for there were in his collection many hundreds of books and much material worthy of preservation—valuable scientific works, files of all his papers, etc. Truly, "one gathereth and another scattereth."

The same old story. We recently met a practitioner who had been duped by buying an absent dentist's practice. All he got was a few office fixtures and the bad reputation left by the seller. Our observation proves that money paid out for an absconding dentist's practice will do little towards building up a practice of one's own.

From New York to San Francisco in '97. This is the purpose of the Pacific Coast Congressional Committee, so we see by a private letter. It does not say that they are prepared to offer a gratuitous trip for the A. D. A., but they are prepared to offer one of the most alluring programs that has ever been presented to any body of men who have ever visited Califo nia. It is in-

timated that a good many of our men of moderate means would like to take the trip, and even take one or more members of their families with them. However, there is much uncertainty of expense incident to such a journey, and every one who travels knows that there is need of consideration on this point. There is a manifest desire to know just what the trip will cost from start to finish, including all expenses—travel, hotels, sight-seeing, etc. From what we have heard a decided enthusiasm could be aroused in the profession, making an excursion that would long be remembered, not only by us in the East, but also on the Pacific Coast. Their sunny land would for the time being flow with milk and honey, and would be at the disposal of those of the A. D. A. who were fortunate enough to become the guests of the Pacific Dental Congress. This sub-committee, appointed by the Congress to visit Saratoga during the session of the American, evidently means business, and doubtless is authorized to place the entire Pacific Coast at their disposal, providing they do not carry it home in their trunks.

We cut from the Royal Academy art notes, in the *London Lancet* for May—"One of the best portraits in the gallery is by Mr. Herkoner, the subject being Dr. J. Leon Williams, whose learned paper on the minute structure of enamel, recently communicated to the Royal Society, we publish this week. The portrait is hung in a fine position, is a good likeness, and a truly artistic picture."

It seems a pity that we have not had more interchange with English practitioners, but few of prominence have visited our American convocations. Mr. Tome's visit here can be emphasized as very noteworthy, certainly of a truly scientific man. We feel certain that they missed a golden opportunity by not coming to our Columbian Congress.

We see by the June DIGEST that another of our long honored professional brothers has gone, Dr. C. W. Spaulding, for many years practicing in St. Louis. Surely he was a staunch practitioner among his numerous associates in that city. We recall seeing Dr. Spaulding clinic at our first meeting with the A. D. A., at Philadelphia. This clinic was a hard cylinder filling; we had never seen one made before. It was a large posterior proximal cavity in a superior cuspid, and the operation was excellent. The Doctor demonstrated at this time his preventive dealing with

sensitive tooth structure with hot burnishers. He believed in the practice and it was effectual. The old school are fast passing from our sight.

The reference to lining cavities for amalgam fillings is surely something that can be profitably noticed. We have heard it much talked of for several years, but it does not seem to have obtained a firm foothold in actual practice as yet.

The editorial remarks in the last DIGEST regarding the possibilities of the Faculties' Association and the National Board of Examiners are in accord with the general drift of thought and expression. There is but one voice regarding a uniformity of law governing practice throughout the United States. Qualifications in one State should be the standard for all, and why there should be such a seeming apathy and delay in consummating a uniformity of legislative action is a question which is asked by a large proportion of the profession.

Keely, of gold cure fame, is out with a book denying that drunkenness is a vice or crime, and that heredity is destroyed by the poisonous effects of alcohol. He says that disease cannot be given by heredity. So far as it asserts this, there is opened an interesting field for discussion. However, it is too hot just now to argue about anything.

Cordially, NEW YORK.

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How dear to our heart is the cash on subscription
When the generous subscriber presents it to view;
But the man who don't pay—we refrain from description,
For perhaps, gentle reader, that man may be you.—*Exchange.*

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A CASE OF UNUSUAL SPEECH DEFECT.—Dr. G. Hudson Makuen, of Philadelphia, presented a young law student who had a marked retraction of the lower jaw, which destroyed the character of the labial sounds. This could only be overcome, he said, by long practice in protruding the lower jaw when speaking. The soft palate was much relaxed, and had been impeded in its action by the existence of adenoid growths. In trying to say "s," instead of the palate rising to the roof of the mouth, it remained down on the tongue. He considered the adenoid thickening in the pharynx as the original cause of the defect in the speech. The patient had received careful instruction as to the best method of overcoming the difficulty of speech, and he demonstrated clearly the marked improvement that had already resulted from persistent practice along this line.—*Dental Register.*

# The Dental Digest.

PUBLISHED THE

TWENTIETH DAY OF EVERY MONTH.

## Editorial.

### MORE REMARKABLE JOURNALISM.

As an example of the peculiar methods adopted by the editor of the *Items of Interest*, note the following. In the July, 1896, No. of the *Items of Interest*, under the head of "Original Communications," is a short article by W. E. Driscoll, entitled "Alloy and Cement for Filling." The whole of this article is taken, word for word, from a letter headed "Alloy and Cement for Filling," which Dr. Driscoll sent to us and which was published in the February, 1896, No. of The DIGEST. Nevertheless, absolutely no credit is given to this journal by the *Items of Interest.*

It is a pity that the editor of a dental journal should set so bad an example by his actions, no matter what precepts he sets forth in his editorials. The aim of dental journalism should be to inculcate higher ideals and motives, and to create a higher standard of morals, but such practices by an editor certainly do not tend to that end.

### BETTER QUALIFICATIONS FOR A DENTIST.

It is not our intention here to go into details as to what the qualifications of a dentist should be, but to make this one broad proposition—that to be a good and successful dentist in every sense of the word requires more varied ability than any other profession.

The question may be asked how so many succeed in dentistry if this proposition be true, which can be answered by the fact that there is one prominent element or portion of dentistry which is largely mechanical. Therefore, as many men who come into the profession have some perseverance, tact, and a little ingenuity

they succeed sufficiently to make a moderate living. But in the broadest sense of the the term it requires men of great ability to be successful in all respects.

We think it proper to agitate this question again at this time, for the reason that in a very few days the College Faculties Association and the National Board of Dental Examiners hold their annual meeting, and as they alone have any say as to what the qualifications shall be, it is important that they discuss this question. At present the dental profession is a catch-all for many of those who fail in other lines of business—they drop into dentistry and succeed to the extent above indicated. College men should look into it that a higher grade of intellect, intelligence, and natural ability be required of their students and graduates.

If we are correct in our estimate of what the qualifications of a dentist should be, then a higher appreciation of these facts by college men is sure to induce them to require greater ability in those they admit to their classes. And the National Board of Examiners should see that laws and rules governing those starting in practice be of such a high order that before long the ability will be increased. We are aware that in this connection the colleges are doing a vast amount of work, nevertheless, the demand is in the direction here indicated, and if they wish to avoid criticism they must remedy the evils now existing.

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## PAINLESS DENTISTRY.

Under the name of "Painless Dentistry" a vast amount of deception has been practiced upon the community, especially since the introduction of cocain as an anesthetic. We gave an expose of some of these abuses to the members of the Protective Association, who asked for same, some years ago.

While it is true that cocain has no preceptible effect on sensitive dentine when applied direct, if injected into the gums, teeth can be extracted or prepared for filling with comparatively no pain. And dangerous as this remedy is, it has been used to a great extent.

Besides the use of cocain the practice of Hypnotism is on the increase and is being taught in some of the dental schools. This

method of obtunding sensibility is looked upon by many as unwise and detrimental, especially to the will power of the patient, and even as impossible by a greater number of dentists.

There is a great desire on the part of those requiring dental service to have it performed with as little pain as possible, and the impression is on the increase that such service is being performed without pain. This causes many practitioners to avail themselves of everything offered which gives promise to satisfy this desire on the part of their patrons, even to the extent of humbugging them into the belief that the suffering is going to be lessened, when in fact they give no special relief except to slight the operations.

The administration of anesthetics is dangerous and therefore objectionable. It is not our intention, however, to take up at this time the merits or demerits of any anesthetic, but to treat with the more recent method of relieving the suffering of our patients by Cataphoresis. Our attention was directed to this method some years ago, owing to the patents on the different apparatus and the disposition on the part of the companies formed for the manufacture and sale of same to mulct the profession. In fact, most of the apparatus that has come out thus far has been involved in secrecy, with a disposition on the part of the manufacturers to involve it in great mystery.

We believe we are correct in stating that all that is required in an apparatus is to control the current of electricity, making it possible for the operator to increase the current or voltage without any break in the current, and be able to carry it to the degree necessary to force the action of the cocain into the dentine or tubuli of the tooth. This method bids fair to be almost universally successful. Think for a moment what this means to the community, as well as the profession.

It is our desire to check this patent abuse and make it possible for the profession to have an apparatus in every way effectual, simple, easily managed, and yet quite inexpensive. With this in view we have made an apparatus which in every way carries out these requirements. This apparatus we propose furnishing to the members of the Protective Association, and we will take care of any patent litigation growing out of its use, believing that anything which bids fair to relieve suffering, as we feel confident this

does, should not be involved with patent monopoly, especially when such patents will not stand a judicial test.

We will furnish our readers a fuller account of this work in our next issue.

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# Notices.

## NORTHERN IOWA DENTAL SOCIETY.

The Northern Iowa Dental Society will hold its next annual meeting at Spirit Lake, Aug. 11–13, 1896, to which all dentists are invited. An interesting and profitable meeting is expected. GEO. H. BELDING, Sec'y.

## HARVARD DENTAL ALUMNI ASSOCIATION.

The Silver anniversary and twenty-fifth annual banquet of this association was held at "The Thorndike," Boston, on June 22, 1896, with sixty-three members and guests present.

The prosperity of the Association was shown by the reports of the Secretary, Treasurer, and Committee on Harvard Dental School, which were submitted.

The invited guests present were: Rev. R. Thomas, D. D., Brookline; Hon. Harvey N. Shepard, Boston; Rev. Willard T. Perrin, S. T. B., Boston; and John H. Colby, Esq., ex-councilman of Boston City Government.

The post prandial exercises were inaugurated by Pres. James Shepherd, who alluded feelingly to the deaths, since the last meeting, of Prof. Thomas H. Chandler, dean of the School, and of Frederick H. Woodcock, instructor in mechanical dentistry. He then called upon the new dean, Prof. Eugene H. Smith, as the first speaker. Dr. Smith, after eulogizing his predecessor and Dr. Woodcock, spoke of the requirements of the school, that greater facilities were needed for increasing the scope of its work. A new building was necessary, now that Chemistry was no longer to be taught in Harvard Medical School, but must be in the dental building; also, that the school needed an endowment fund. The graduating class, numbering twenty-two, was the largest ever within the school's history.

Each of the guests spoke in a happy manner with excellent effect, and several were humorous to a great degree.

The officers for the ensuing year are as follows: Frank Perrin, D. M. D., '77, President; Joseph T. Paul, D. M. D., '91, Vice-President; Waldo E. Boardman, D. M. D., '86, Secretary. Executive Committee, Waldo E. Boardman, D. M. D., Chairman, William P. Cooke, D. M. D., and Harry S. Parsons, M. D., D. M. D. The officers of the association compose the committee.

WALDO E. BOARDMAN, D. M. D., '86, Sec'y.

## AMERICAN DENTAL ASSOCIATION.

Arrangements have been completed as far as possible for the meetings at Saratoga, July 31—August 8, 1896. *All* the *railroads* have granted a reduction of a fare and one-third on the *certificate plan.* Pay full fare in going and be sure and *take a receipt* therefor, otherwise the reduced rate *cannot be obtained* for the return trip. Tickets may be bought July 28th, and are good until three days after the meetings.

The meetings will be held at the Grand Union Hotel. Hotel rates range from $4.00 per day to $8.00 per week. Write to Dr. E. Doolittle, Saratoga, N. Y., and secure your room now. Any priced room can thus be secured and all trouble and confusion avoided.

The most interesting meeting for many years is promised and one which no progressive dentist can afford to miss. Take the time and attend this—the National Association.

J. N. CROUSE, Chairman Exec. Com.,
2231 Prairie Ave., Chicago.

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## MASSACHUSETTS DENTAL SOCIETY.

At the thirty-second annual meeting of the above named society, held in Boston, June 3 and 4, 1896, the following officers were elected for the ensuing year:—President, Waldo E. Boardman, D. M. D., Boston; First Vice-President, S. S. Stowell, D. D. S., Pittsfield; Second Vice-President, Harry S. Draper, D. D. S., Boston; Secretary, Edgar O. Kinsman, D. D. S., Cambridge; Treasurer, Edward Page, M. D.,D. M. D., Charlestown; Librarian, Thomas W. Clements, D. D. S., Brookline; Editor, Joseph T. Paul, D. M. D., Boston.

Executive Committee, appointed by the president:—Dr. G. A. Lowe, Rockport; of North Eastern District Dental Society; Dr. W. M. Lamkin, Lynn, of North Metropolitan; Dr. L. D. Shepard, Boston, of South Metropolitan; Dr. B. H. Strout, Tauton, of South Eastern; Dr. J. F. Adams, Worcester, of Central; Dr. Geo. A. Maxfield, Holyoke, of Valley; Dr. A. W. Gabler, Pittsfield, of Western.

Committee on Dental Legislation, appointed by the president:—Dr. R. R. Andrews, Cambridge; Dr. L. D. Shepard, Boston; Dr. S. G. Stevens, Boston; Dr. Geo. A. Maxfield, Holyoke; Dr. C. T. Stockwell, Springfield.

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ALUMINUM has not proved to be of very much value for surgical instruments, as it is deficient in elasticity and will stay bent. The instruments are also so light that the surgeon misses the reliability that the weight of steel imparts.—*Ex.*

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RELIEF OF THIRST AND DRYNESS OF MOUTH.—Thirst and great dryness of the mouth in illness are often relieved by a teaspoonful of powdered gum arabic, beaten thoroughly with a couple of teaspoonfuls of glycerin, to which are added a glass of cold water and enough lemon-juice to make the mixture palatable. The mixture may be taken freely.—*Medical Times.*

# News Summary.

ETHYL CHLORIDE spray stopped hemorrhage from an extracted tooth socket.—*Hind.*

ALABAMA EXEMPTS DENTISTS FROM JURY DUTY.—A law was passed in Alabama in 1895 providing that all practicing dentists in the State shall be exempt from jury duty.

WANTED.—Position with professional dentist, by experienced operator, crown, bridge and plate worker. Address "A," Care Dental Protective Supply Co., Champlain Bldg., Chicago.

CHICAGO COLLEGE ALUMNI QUARTERLY.—A copy of the *Bur*, the officia organ of the Alumni Association, Chicago College of Dental Surgery, is before us. It is a continuation of the *Alumni News*, and is very neat in appearance. We wish it success.

DENTISTRY FOR WIDOWS.—Widows of Russian officers who are not entitled to pensions are to be provided with a novel means of obtaining a livelihood. In the autumn ten vacancies at one of the principal schools of dentistry will be open to them, and, after a two years' course of instruction, the sucessful candidates will be in a position to practice.—*Chicago Tribune.*

EUCAINE.—Under this name a new substitute for cocaine has been brought out by a Berlin dentist named Kiesel. It is prepared synthetically, and the chemists describe it as "a methyl ester of benzo-yloxypiporidine carboloxylic acid." It is clamed for it that it does not affect the heart, produces more extensive anæsthesia than cocaine, and is non-poisonous. Probably, it will also be much cheaper.—*Brit. Jour. Dent. Sc.*

A POSSIBLE SOURCE OF INFECTION.—The *New York State Medical Reporter* suggests that the promicuous use of ordinary drinking-water for the extemporaneous preparation of solutions for hypodermic injections is possibly the cause of much disease, the infection of which is capable of transmission through the medium of water, as malaria, typhoid fever, and diphtheria.

ADVANTAGE OF USING WARM SOLUTIONS OF COCAIN.—Costa has found that the local anesthetic effect obtained with cocain is more rapid, more intense and more lasting, if the solution is warm. The dangers of intoxication are thus much diminished, as the quantity of cocain can be very much reduced, if it is warmed. A solution at 0.5 or 0.4 per cent. heated will produce a powerful effect.—*Semaine Medicale*, May 9.

SOLUTIONS.—The calculation of percentage solutions is always based upon the number of grains of water in a fluid ounce. The exact weight is four hundred and fifty-five grains, and the simplest way is to multiply this number by the percentage desired. In other words, we take one grain of the drug for every hundred grains of water. Thus to obtain a four per cent solution, we multiply four hundred and fifty-five grains by four per cent, which gives

eighteen and two-tenths grains, or, roughly speaking, eighteen grains to the fluid ounce of water.—*Medical Brief.*

ATTACKS OF STRIDULOUS LARYNGITIS COINCIDING EXACTLY WITH APPEARANCE OF CERTAIN TEETH.—Coulon (*La Medecine Infantile*, 1895, ii. 643) reports that three to seven days before the appearance of the first tooth, at eight months, of the inferior canines at nineteen months, and of the last molars at twenty-four months, there were attacks of false croup coming on in the middle of the night and lasting a few hours. Constipation followed by diarrhœa also usually preceded by a few days the cutting of every tooth.

AN INTERESTING FIND.—A couple of teeth found at Tanbach, near Weimar, are, says *Nature*, claimed to be the oldest human teeth yet found in Europe. One is a milk molar, and the other a permanent first molar of the left lower jaw. The grooves in the latter tooth shows a striking resemblance to one of the chimpanzee, but not so much to those of the gorilla or ourang. Attention is called to the fact that certain of the molars in civilized man are reduced in size from those of early man, just as has been shown to happen with domesticated dogs descended from wild dogs.

ALLEGED SAFE METHOD OF INHALING CHLOROFORM.—According to Dr A. Guerin, of Paris, death from chloroform may be avoided if it is inhaled exclusively through the mouth. When death occurs from stoppage of the heart, the cardiac muscular fibres cease to contract under the influence of a reflex action exerted by the nasal nerves on the pneumogastric, stimulating the inhibitory power of the latter on the heart. He further shows that when a rabbit is subjected to tracheotomy, and then made to inhale chloroform directly through the trachea, the drug has no effect whatever on the heart. On the contrary, when chloroform is held before the nose of the rabbit, the heart immediately stops. The trachea being cut transversely, it is obvious that the chloroform inhaled by the nostrils cannot reach the heart through the bronchi. Dr. Guerin therefore assumes that the anæsthetic agent exerts its injurious action upon the movements of the heart through the intervention of the nasal nerves and the cardiac branches of the pneumogastric, the former acting reflexly on the latter. Dr. Guerin therefore advises that the nose of the patient should be held by the fingers until general anæsthesia is produced, when there can no longer be any reflex action of the nasal mucous membranes anæsthetized like the rest of the body.—*The General Practitioner.*

OXYGEN ANTIDOTAL TO THE SEQUELAE OF ETHERIZATION.—The *American Therapist*, May, quotes Dr. Theophilus Parvin as being a convert to the views of Professor Landau, of Berlin as to the use of oxygen after ether anesthesia. Dr. Parvin further observes that Landau is one of the few Berlin operators who prefers ether to chloroform as an anesthetic; and he has found by a very large experience that, as soon as the operation is ended, if the patient immediately inhales oxygen freely for a few minutes, she does not subsequently suffer from headache or nausea and vomiting. The immediate effects of inhaling oxygen are: The dusky hue of the face disappears, and the pulse becomes fuller and slower; there is, too, a more rapid recovery of consciousness. He had many opportunities of witnessing these results at Dr.

Landau's hospital. The day subsequent to operations, Dr. Parvin several times visited these patients, at the doctor's request, asking them as to the removed. but it was considered advisable to keep her in the hospital, and death freedom from vomiting and pain, and the invariable reply was that they had neither.

VALUE OF SILVER AS AN ANTISEPTIC.—It may be some consolation to the silver men to learn that science has recently found an important use for silver, as announced at the Berlin "Chirurgencongress" by Crede, of Dresden. If a plate of metal is placed on a culture of staphylococcus aureus, a sterile zone soon forms around it, while the metal itself is affected by the secretions of the microbes, which produce lactic acid, forming a lactate of the metal. Thallium is the most powerful in this respect, and silver next, but as the lactates of thallium and of silver are very poisonous, Crede experimented chiefly with the corbonate of silver, impregnating with it silks, catgut and drains, and using it on gauze in a fine powder or in leaf sheets. It proved exceedingly effective as an antiseptic for wounds where a prolonged action was desired, while never causing pain nor irritating the tissues. He found it still antiseptic even after remaining on a wound eight days. He has also administered it hypodermically in five cases of acute infection, such as erysipelas, with success and no unpleasant rssults. In one case the solution contained one gram of lactate of silver. He speaks from seven months' experience.—*Semaine Medicale* June 3.

TUMORS OF THE SUPERIOR MAXILLARY.—These growths are often very insidious in onset, and may be far advanced before the patient is aware of their presence. They commonly commence in cavities quite inaccessible to exploration, and are only manifest when they begin to encroach on the skin or mucous membrane. In all cases in which a deep-seated tumor of the superior maxillary is suspected, the nasal passages, the vault of the palate, the pharynx and post-nasal space alike should be carefully explored. When the configuration has altered and the osseous walls impinge, by the use of the needle it will, be found that the bone has become more vascular and is much more friable than normal. From the prognostic point of view, sarcomata with small cells are the most malignant; those with intermediate, hyaline substance are less so; the fibro-sarcoma with giant cells the least. The endotheliomata progress slowly and often undergo cystic changes, and are but slightly malignant. Epitheliomata here are no less malignant than sarcoma.—M. HAMMER, in *Gazette Hebdomadaire de Medecine et de Chirurgie.*

A CASE OF INTEREST.—On May 27, at St. Bartholomew's Hospital, Mr. Samuel Langham held an inquiry with reference to the death of Rosina Elizabeth Foster, aged 14½ years, a box-maker, lately living at 27 Shaftesbury Place, Aldersgate Street. Sarah Ann Foster, the mother, stated that for some weeks the diseased had suffered terrible pain through the decay of a bad tooth. On Monday week she was so ill that she went to the hospital, with the intention of having the tooth extracted. She was detained in the hospital, and the following day witness heard she was dead. Dr. John Michel, house physician, stated that deceased was placed under gas and the tooth satisfactorily

took place very suddenly the following day. The autopsy showed that death was due to inflammation of the brain, of very rapid development, but whether it was caused through the operation or the effect of the gas was uncertain, although he did not think so. Several of the hospital physicians saw the deceased just before her death, but not one of them could diagnose the case, and inflammation of the brain was not at all visible during life. It was the most extraordinary case that had ever come under the notice of the hospital staff. The general impression of all was that the inflammation was not set up by the tooth, but there was absolutely nothing to show any other cause. The jury returned a verdict "That the deceased died from inflammation of the brain, but how set up the evidence failed to show."—*The Morning.*

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## Obituary.

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DIED.—At Riverpoint, R. I., June 9th, 1896, Dr. C. W. Spalding, in the 82nd year of his age.

Dr. Christopher W. Spalding was born March 15th, 1814, in Rhode Island, of Scotch origin. His ancestors were prominent in the Revolutionary war.

Dr. Spaulding received a common school education. In 1840 he removed from his native State to New York State. In the same year he began his professional studies and received the Degree of Doctor of Dental Surgery in 1851, and that of Doctor of Medicine in 1869.

In 1847-48, Dr. Spalding spent a year in Savannah, Ga. In 1849 he removed from Ithaca, N. Y., to St. Louis, where he resided for many years.

He took a leading part in the organization of the Western Dental Society in 1851, and has been prominently identified with the American, several State and City Associations, and has been actively engaged in every good work which would tend to elevate the profession of his choice.

He was also an ardent advocate of the Homœopathic School of remedies and was very successful in their administration.

In 1838 Dr. Spaulding married Miss Cornelia Anna Erb, also of revolutionary stock. Of this union there is one son, Dr. Jno. H. Spaulding, who succeeded to his father's practice in this city.

Dr. Spaulding and wife, whose death preceded his over a year and a half, removed to Rhode Island in August, 1890, to spend their declining years in the State of their nativity.

In the death of Dr. Spaulding we have lost an earnest and faithful laborer in the healing art, and be it

*Resolved*, That a memorial page be set aside in the Society's Transactions and a copy furnished the journals for publication.

H. J. MCKELLOPS,
WM. N. MORRISON,
J. B. NEWBY.
Committee of St. Louis Dental Society.

St. Louis, Mo., June 19th, 1896.

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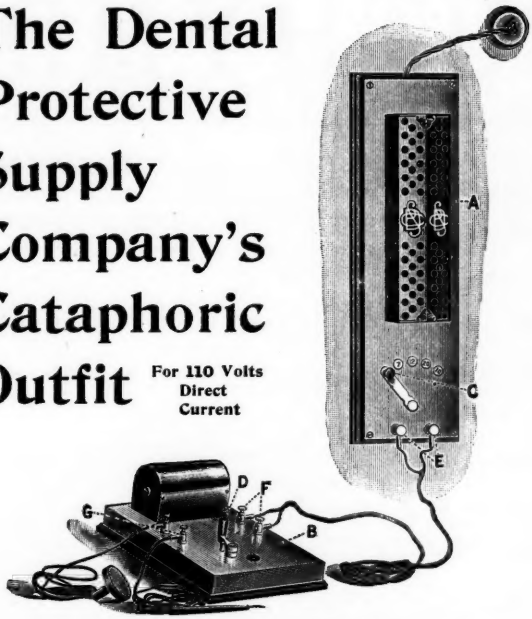


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